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ORIGINAL ARTICLES.

THE COMPARATIVE RESULTS OF LITHOTOMY, LITHOLAPAXY AND LITHOTRITY IN ONE HUNDRED OPERATIONS FOR STONE.

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The new instruments and modified methods introduced by Bigelow, of Boston, for crushing and evacuating vesical calculi seemed at first dangerously severe. In litholapaxy one must often work with his instruments in the bladder for more than an hour, and it naturally impressed surgeons as a rash and perilous procedure. I confess to having felt strong fears in this direction, and many other surgeons were even more timid in the matter than myself. Prof. Paul F. Eve seems to have avoided the new plan almost entirely, and Prof. James R. Wood, of New York, shortly before his death, showed me his collection of vesical calculi, and informed me that he had just cut for stone the ninetieth time, and had never crushed in a single instance.

However, experience soon showed that the bladder is far more tolerant of even a whole hour or more of careful instrumentation, which thoroughly clears it of débris, than of incision, or of repeated brief crushings which leave a mass of sharp-angled fragments in the cavity for days together. In short, the danger of litholapaxy has proved, in my practice, decidedly less than that of the old style of lithotrity, or of lithotomy. All hesitation has vanished. I have now operated for stone one hundred times; fifty-five times by cutting, with seven deaths; six times by the old style of lithotrity of Civiale and of Sir Henry Thompson, with one death; and forty times by Bigelow's litholapaxy, with one death. The following is a summary of the cases:

SUMMARY.

Total number of cases of lithotomy, 55; deaths, 7; mortality 13 per cent.

Lithotomy below age of puberty, cases, 26; deaths, 2; mortality 8 per cent.

Lithotomy above age of puberty, cases, 29; deaths, 5; mortality 17 per cent.

Lithotrity after the manner of Sir Henry Thompson, cases, 6; deaths, 1; mortality 17 per cent.

Litholapaxy after the manner of Prof. Bigelow, cases, 40; deaths, 1; mortality 2.5 per cent.

Of the 101 operations above tabulated, two only were upon females.

It will be observed that the total number of operations in the tables is 101, instead of 100. This is in consequence of including one litholapaxy in addition to those performed with my own hands, which was done on a hospital patient by my colleague in my temporary absence.

The increase of safety by the introduction of litholapaxy is immense, and, in my opinion, almost all adult operations for stone in the bladder should be done by this method. However, let no man delude himself with the notion that this rule has no exceptions. The following classes of cases still require the cutting operation:

1. All children whose urethræ are too small to admit small-sized lithotrites.

2. All cases where the stone is too large to be grasped by the instrument. Case 14,714 was of this character. Having a diameter of 9 centimetres, the jaws of the instrument could not grasp it, and I was obliged to proceed by suprapubic lithotomy. The peculiarities of this case give it special interest. It turned out that there was a thick mass of connective tissue indurated by inflammation between the bladder and the upper border of the pubis. I first introduced into the bladder the French instrument called the *sonde à dard*, in order to use it as a guide to the suprapubic incision. It is made like a strong silver catheter, but carries in its canal a curved steel dart or stiletto with a groove on its surface. The operator inserts it into the bladder and, pressing the tip against the front of the viscus, pushes the dart forward till it pierces the tissues and appears in the bottom of the primary incision. The bistoury is then entered into the groove and guided by it into the bladder. In this case the dart would not pierce the tough mass of tissue, and I was obliged to go in with the scalpel alone. I finally found the cavity with the stone in it, well back against the rectum, after a dissection of alarming depth, and then extracted the immense calculus without further difficulty.

3. In a few cases mulberry calculi are so hard

LITHOTOMY.

No. of Case in Record.	Sex.	Age. Years.	Description of Stone.	Operation.	Result.	REMARKS.
54	Male.	7	Triple phosphate, diameter 3x4½ cm	Lateral lithotomy.	Died.	Septicæmia; this was before the advent of
20	"	38	Phosphatic, diam. 3x5 cm.	" "	Cured.	[antiseptic methods.
271	"	11	" " 2x8 " cylind'cal form	" "	"	Discharged in 30 days.
1,294	"	5	" " 3x5 "	" "	"	Discharged in 42 days.
1,720	Fem.	55	" " 1x3	Cut forward to pubis and then to left.	"	Partial incontinence followed.
1,746	Male.	65	" " 2 "	Lateral lithotomy.	Died.	Sinking with exhaustion before operation.
1,755	"	35	" " 2 "	" "	Cured.	[Some hæmorrhage.
1,766	"	6	" " 2 "	" "	"	
1,783	"	35	" " 4x5 "	" "	"	Discharged in 25 days.
1,785	"	5	" " 4x5 "	" "	"	
1,789	"	7	" " 4x6 "	" "	"	[after operation.
5,176	"	20 mos.	" " 2 "	" "	Died.	Lived in septic apartments. Died 77th day
5,700	"	12	" " 3x6 "	" "	Cured.	Had cystitis from birth. Stone supposed to
5,176	"	2	" " 2 "	" "	"	[exist before birth.
6,060	"	3	" " 1½ "	" "	"	
6,151	"	35	" " 3 "	" "	"	
6,550	"	52	Two calculi	" "	"	Two calculi. Went home in 21 days.
6,836	"	....	Mulberry calculi, weight 13 grams	" "	"	Discharged in three weeks.
6,930	"	....	Phosphatic, diam. 3 cm.	" "	"	Discharged in four weeks.
7,017	"	40	Two phosphatic calculi	" "	"	Discharged in four weeks.
7,526	"	4	Two small calculi	" "	"	
7,799	"	2	Diameter, 4 cm.	" "	"	Discharged in four weeks.
7,693	"	5	Phosphatic calculi, diam. 3x4 cm.	" "	"	Discharged in three weeks.
8,497	"	58	9 Phos. calculi, combined wt. 176 grams.	" "	"	Discharged in six weeks.
8,515	"	11	Calculus in memb. portion of urethra 5 cm. long.	" "	"	
8,535	"	23		" "	Died.	Lived eight days.
8,584	"	7		" "	Cured.	
7,626	"	4	Diameter 4x5 cm	" "	"	
7,628	"	14	Mulberry, diameter 3 cm.	" "	"	
7,721	"	35	Phosphatic, diameter 5x5½ cm.	" "	Died.	Bladder ulcerated and bled freely from its
8,727	"	25	" " 4x5 "	" "	Cured.	[coats.
6,094	"	2	" small	" "	"	[cerated cavity below prostate.
6,171	"	Adult.	" multiple	" "	Died.	Lived a few weeks. Stones were in an ul-
7,078	"	"	Mulberry, diameter 3 cm.	" "	Cured.	Discharged in five weeks.
9,270	"	3	Diameter 1 cm	" "	"	
9,271	"	9	Mulberry, diameter 3 cm.	" "	"	Discharged in five weeks.
9,337	"	2½	Diameter 3 cm	" "	"	Discharged in one week.
9,458	"	66	" 4x5½ cm	" "	Died.	Sclerosis of spinal cord.
9,475	"	36	Phosphatic, diameter 1½x2 cm.	" "	Cured.	Discharged in five weeks.
9,614	"	71	Diameter 2x5 cm	" "	"	The following year took cystitis and died; no recurrence of stone.
10,341	"	73	Long slender calculi, accreted around the stem of some vegetable.	" "	"	Discharged in three weeks.
10,481	"	22	Mulberry, diameter 4 cm.	" "	"	
10,677	"	2	Diameter 1x2½ cm	" "	"	[globular in shape.
10,752	"	62	Three phosphatic stones	" "	"	Disease recurred, forming several new stones,
10,977	"	62	Diameter 3x4 cm	" "	"	
11,145	"	5½	" 4 "	" "	"	Discharged in twelve days.
11,318	"	33	" 3x6 "	" "	"	Discharged in three weeks
11,852	"	11	" 3x4 "	" "	"	Discharged in two and one-half weeks.
11,990	"	14 mos.	" 2x3 "	" "	"	Discharged in two weeks.
12,086	"	69	Weight 19 grams	" "	"	Discharged in two weeks.
13,589	"	4	Diameter 1½ cm	" "	"	[and then lithotomized.
13,605	"	16	Mulberry, diameter 3½ cm.	" "	"	First broke a strong lithotrite on this stone,
14,437	"	2	Weight 6 grams, diameter 3 cm.	Median "	"	Left for home seventh day.
14,714	"	18	Phosphatic, weight 128 grams, diameter 9x6x3½ cm	Suprapubic "	"	Discharged and went home 19th day. Litholopaxy attempted, but lithotrites could not seize so large a diameter.
13,743	"	64	Phosphatic, accreted on a bullet lodged near the prostate gland.	Rem'd by incision, not opening blad'r	"	Carried this bullet and calculus over 20 years before removal; ball rec'd in Atlanta camp'n.

LITHOTRITY BY MULTIPLE SITTINGS.

5,366	Male.	Adult.	Concreted around roll of chewing gum	10 sittings, 19 days.	Cured.	Discharged in four weeks.
10,230	"	68	Phosphatic, diameter 1 cm.	5 sittings, 3 weeks	"	Discharged in four weeks. Had been lithotomized twenty years before.
10,227	"	50	Diameter 3 cm	11 sittings.	"	
10,027	"	64	" 2 "	10 sittings, 7 weeks	Died.	
10,197	"	Adult.	Phosphatic, diameter 2 cm.	3 sittings, 8 days.	Cured.	
10,239	"	"	Diameter 1½ cm.	11 sittings, 23 days.	"	

that they cannot be crushed without breaking the lithotrite. Case 13,605 was of this sort. Seizing it, I was unable to break it with the utmost strength of both hands applied to a strong lithotrite. Calling an assistant to take hold with me we commenced to exert our full force, when a metallic clink from within the bladder told that the instrument was broken. The shank of the female blade was cracked half across, and distorted enough to prevent closing the jaws again. Here was a dilemma. The instrument could not be drawn out unless closed, and for a time it was probable that it would be necessary to incise freely upward through the perineum, pry the open jaws of the instrument downward through the incision, and file off the shank. However, I succeeded after a time in slipping the blades past the hitch, and closing the jaws. I then withdrew the lithotrite and proceeded at once to remove the stone by lateral lithotomy. The patient recovered, but it was proved that two strong men are too much for one lithotrite. I think it probable,

LITHOLAPAXY, OR EVACUATION OF STONE AT ONE SITTING.

No. of Case in Record.	Sex.	Age. Years.	Description of Calculus.	Operation.	Result.	Remarks.
10,752	Male.	62	Small multiple stone after previous lithotomy.	Litholapaxy.	Cured.	Some very small ones came out uncrushed with the fragments.
10,752	"	63		Pump'd out 7 small globular stones without crushing	"	Recurrence of new stones in same patient. Not old fragments.
10,833	"	71	Phosphatic, weight 69 grams.	Operation took 1 hour 32 minutes.	"	Recovered easily.
11,170	"	31	Small	Extracted without cutting or crush'g	"	
*	"	70	Very Small	Litholapaxy.	"	
10,782	"	30	Mulberry, diameter 2 cm.	"	"	Rode three miles on sixth day.
10,814	"	70	Diameter 4 cm	"	"	Discharged in six weeks.
10,821	"	58	" 4 "	"	"	Operation, 25 minutes.
10,825	"	66	Mulberry, diameter 3 cm.	"	"	" 29 " Recurred five mos. later.
10,837	"	63	Phosphatic, " 2½ "	"	"	Operation, 33 minutes.
10,860	"	25	Hard, diameter 2½ cm	"	"	" 29 "
11,348	"	48	Diameter 1½ cm	"	"	" 25 " [small stones.
11,367	"	Adult.	" 8 millimetres.	"	"	Has, in 6 months before operation, passed 6
11,610	"	27	" 1½ cm	"	"	Discharged in ten days.
11,660	"	38	" 2 "	"	"	Operation, 40 minutes, discharged in 2 wks.
11,827	"	66	Phosphatic, diameter 4½ cm.	Ord'ry litholap'x'y	Died.	Lived 36 days. Cause of death obscure.
11,896	"	65	Two stones	" "	Cured.	
12,023	"	65		" "	"	Recurrence after a previous litholapaxy.
12,113	"	66	Small	" "	"	Recurrence of Case 10,825.
12,145	"	30	"	" "	"	Discharged in eight days.
12,327	"	22	Diameter 4 cm	" "	"	Discharged in 8 days, operation, 33 minutes.
12,355	"	30	Weight 8 grams.	" "	"	Discharged in 30 days.
14,841	"	31	Very hard mulberry cal., diam. 3½ cm.	" "	"	Required the utmost strength of the hands to break the calculus.
13,457	"	67	Diameter 3 cmm., weight 13 grams.	" "	"	Operation lasted 40 minutes.
13,485	"	48	Mulberry calculus, diam 1 one-fifth cm.	" "	"	" " 20 "
13,508	"	66	Wt., dry, 4½ grams, diam. 2⅛ cm., phos.	" "	"	" " 30 "
13,598	"	61	Phosphatic, soft, diam. 2 cm	" "	"	Found and removed a small piece some days after first operation.
13,604	"	50	Rather small	" "	"	Six months later albuminuria commenced.
13,724	"	65	Phosphatic, soft, diameter 2 cm	" "	"	Washed out small piece 13th day; went home
14,406	"	24	Nucleus of chewing gum, wt. 6 grams.	" "	"	Went home cured 8th day. [15th day.
14,448	"	17	Phosphatic. nucleus of gum, wt. 7½ grms	" "	"	Discharged cured 7th day.
14,548	"	40	Diameter 1½ cm	" "	"	" " 9th day.
14,577	"	54	" 2¾ "	" "	"	" " 6th day.
14,691	"	Adult.	Weight 68 grams, diameter 4¼ cm.	" "	"	" " 16th day.
14,713	"	60	Weight 2 grams.	" "	"	" " 6th day.
14,788	"	22	Small and very hard	" "	"	Left for home 13th day.
. . . .	"	71	Several small stones.	Evac'ted with tube without crushing	"	Subsequently got a new stone too large for tube, and died refusing operation.
13,746	Fem.	36	Phosphatic, diameter 2 cm	Litholapaxy.	"	Done by my colleague in my absence from
13,744	Male.	66	Small size.		"	Rapid recovery. [hospital.
13,745	"	63	Small, white, globular	Pumped out by large tube without crushing.	"	" "

* Record lost.

also, that a stone might sometimes be found accreted around some smooth piece of steel or iron previously slipped into the urethra by the patient and lost in the bladder. The calculous mass could easily be crushed loose from the steel, but unless the surgeon could succeed in seizing the latter by the end, he could not withdraw it, and might possibly have to cut for it. Two or three times I have found stones containing rolls of chewing gum for nuclei. The gum is slightly pasty, but it breaks into pieces small enough to come readily out through the tubes. I judge that we ought to have a lithotrite a little thicker and stronger than any now made to apply to unusually hard stones.

4. Deformities of the bladder sometimes render it impossible to seize a stone. The deformity may consist of a sacculus too deep to be explored by the jaws, or a stone may be hid behind a prominence of the prostate, so that a lithotrite cannot reach it. I was once called in council by a skilful surgeon who, in attempting lithotomy, found this difficulty to such an extent that, though he had already cut the patient, he could not seize the stone with his lithotomy forceps, because they happened to be straight. My own forceps, which are curved, seized it without much difficulty.

5. Strictures of the urethra forbid litholapaxy, unless they are first overcome. Case 14,841 had this obstruction. It was first divided by Maisoneuve's stricture cutter, and the litholapaxy successfully performed about a week later.

These various obstacles to litholapaxy are rarely insuperable in adults, so that out of forty-two proposed operations of this sort, only two had to be changed to lithotomy; yet these two are enough to show that a surgeon should always go to a case prepared for either operation.

Case 8,497 (lithotomy) was remarkable for containing nine stones, of which six were of large size and accurately fitted to each other by attrition, as shown in the annexed cut. Their combined weight was 176 grams.

Prof. Bigelow's main improvements are thoroughly established, at least until something better can be devised; yet, excellent as it is, litholapaxy in its present form has certain objectionable features which are common to all efforts to evacuate the crushed fragments by a to and fro current. The bulb of his apparatus is first compressed, driving some water into the bladder, and then allowed to expand and draw it out again. This expansion draws a stream of fragments with

it, some of which reach the bulb; but, as the suction lasts only during the instant of the bulb's expansion, the current ceases and stops a long row of fragments in the tube, only to drive them swiftly back into the bladder at the next compression. By this churning to and fro many sharp-angled pieces are alternately drawn out of the bladder and shot back into it scores of times before they finally escape into the bulb, thus irritating the bladder by the pelting of sharp fragments, and by the constant and prolonged repetition of forced distensions.

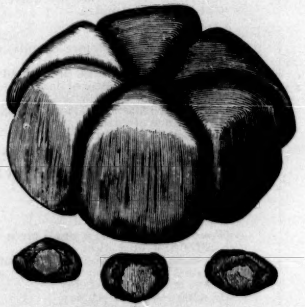


Figure 1.

Evidently we need, not a churning to and fro, but a continuous current, always in one direction, but, as the outflow tube must be large, to allow the pieces to pass it, one would judge at first thought that there would be no room for a sufficient inflow tube by the side of it.

Careful mathematical calculations, verified by experiments, showed me three years ago that, by having a reservoir of warm carbolated water 42 inches above the pubis of the patient, and a peculiarly constructed double tube, the inflow channel can be reduced to a small size, and still supply a current forcible enough to sweep all fragments rapidly out or the bladder. The following cuts illustrate the apparatus:

Figure 2.

Figure 3.

Fig. 2 represents a bucket or other reservoir filled with warm carbolated water and suspended 42 inches above the patient's pubis, while a syphon of rubber tubing descends from the bucket to the inflow branch of the evacuating tube.

A strainer shaped as in Fig. 3 is attached to the upper end of the tube and dropped into the bucket. The evacuating tube is double, and the inflow part is smaller than the outflow, and lapped halfway around it as shown in enlarged cross sections in Fig. 4, where the cylindrical tube A B is the outflow channel and the lunate space B C is the inflow portion.

Fig. 5 gives a side view of the evacuator. Z is the inflow tube which attaches to the rubber syphon shown in Fig. 2. The inflow tube passes by the curved outflow tube J O without infringing on its calibre, and laps itself around the under half of the outflow tube as shown at B C, Fig. 4. Near the end X, it discharges into the bladder by about thirty small openings. This sends a copious current into the bladder, which rushes into the fenestrum X of the outflow tube X J O., and sweeps out the crushed fragments with great velocity.

It will be observed that the outflow pipe is prolonged a little by a piece of rubber tubing, J O, the use of which requires a word of explanation. Both in Bigelow's instrument and in my own, the fenestrum X is often blocked by several fragments rushing to the orifice at once and locking themselves together in a sort of arch, obstructing the outflow and causing a sudden diminution of the stream of water. When this occurs the surgeon closes the lower end of the short rubber tube J O

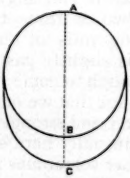
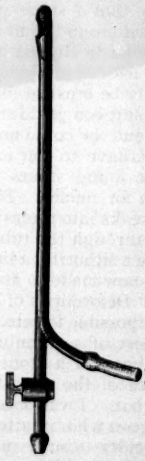


Figure 4.



Figur 5.

by seizing it with the thumb and finger of one hand, and then with the corresponding digits of the other hand suddenly compresses the rubber

just above. This sends a quick, forcible jet back into the bladder, driving back the fragments lodged across the fenestrum X, and permitting the outward current to resume its course. I devised this apparatus three years ago, and have reason to be highly pleased with its use.

In respect to the new term, litholapaxy, some object that it designates only an improved form of lithotrity, and consequently that Bigelow is not really entitled to inflict it upon an art already overburdened with technicalities, and some European authors decline to use it. However, there are good reasons for adopting it. Lithotrity is a harsh, rough word, and has the inconvenience of sounding so much like lithotomy when carelessly spoken, that surgical teachers and pupils dislike it. Litholapaxy, on the contrary, is smooth and easily distinguished. Moreover, it etymologically means "stone evacuation," and hence is appropriate to include both cases of actual crushing, and also those frequent ones in which the great tubes of Bigelow evacuate stones of some little size without the necessity of crushing. The ability to do this is an important merit. It is probable, therefore, that the word litholapaxy will remain in use, and lithotrity disappear.

No. 6 Sixteenth St., Chicago.

FOUR CASES OF GUNSHOT WOUND OF THE ABDOMEN TREATED BY LAPAROTOMY, WITH REMARKS.

Read before the Kentucky State Medical Society, May 9, 1889.

BY DAVID BARROW, M.D.,
OF LEXINGTON, KY.

Case 1.—On July 28th last, about midday, I was requested to see a man at St. Joseph's Hospital, who was reported to be shot in the abdomen. Finding him in the ward, we obtained the following history, principally given by others, though he himself was conscious and would answer questions.

M. K., white, aged 31 years, strong and muscular, had that morning, at Payne's Depot, a station eight miles from Lexington, been shot. He was brought to Lexington on the train, and from the depot to the hospital in a wagon. He had vomited frequently, and had suffered continuous and intense abdominal pain; so great at times that morphine was given hypodermically. Thirst was intense, and considerable water was drunk, with the effect, usually, of causing him to vomit, and so great was the collapse at times that during the rough journey stimulants were given.

He was shot with a 44 Colt's pistol at 10 A.M., and we saw him two and a half hours later. His condition at our visit was one of marked shock. He lay upon a bed breathing rapidly, and wet with perspiration. The movements of the upper extremities were frequent and restless, and the thighs were flexed slightly upon the abdomen; the pulse was rapid, weak and irregular, expression anxious and skin cold; vomiting frequent, and he complained bitterly of pain in the abdomen. The wound was ½ inch to the left of and 1½ inch below the umbilicus; the ball had passed through the rectus muscle, and from the wound projected a portion of the omentum, somewhat soiled and injected, but not strangulated; the abdomen was hard and retracted, and dull over most of its anterior region, and from the wound came every few seconds blood and gas, the odor being fæcal. By firm pressure a considerable quantity of blood could be forced out of the cavity. His condition, with this evidence and the location of the wound, made it certain that the alimentary canal was wounded, and possibly other important structures; also, an active hæmorrhage was going on. There was only the wound of entrance, and this gave no evidence of the course taken by the ball.

An operation was decided upon, and a physician who had, unfortunately, been a party to the shooting, and who was present, urged that it be done at once; so, the patient's consent being obtained, everything was made ready.

Antisepsis was attempted, using for instruments carbolic acid, and for all other purposes bichloride of mercury. He was put upon the table three and a half hours after being shot, and the anæsthesia begun. There were present Drs. Brock, Coleman, Molloy and Robinson, and they kindly assisted me in the operation. The integument, after being carefully washed with water and soap, was shaved and washed with ether, and wet bichloride towels were applied. The incision was in the median line, between the umbilicus and pubis, and about 4 inches long. Dissecting carefully until the peritoneum was reached, it was incised between forceps, and the cut enlarged with the finger as guide in the peritoneal cavity. Blood welled up, and considerable gas escaped. As hæmorrhage continued free, the intestines, after the incision was enlarged to about 7 inches, were rapidly delivered and surrounded with warm bichloride towels, and the bleeding vessels sought.

Two branches of the superior mesenteric artery were found bleeding—these were controlled by forceps and left to be tied later. The intestines were then carefully examined, and seven large, ragged perforations found. The mesentery was also wounded in five places and badly lacerated. The intestines were empty, and there was no fæcal extravasation.

The perforations being very ragged, were trimmed with the scissors and closed with the continuous Czerny-Lembert suture, using fine catgut for the purpose. After suturing the perforations, the mesenteric vessels were ligated and all raw surfaces of the mesentery approximated The intes-

tines were then, after being cleansed, returned to the cavity.

During the entire suturing warm bichloride towels, 1 to 20,000, protected the intestines, and as little manipulation was done as possible under the circumstances. The cavity was thoroughly irrigated with several pitchersful of bichloride solution, and sponged clean and dry. The incision was closed with silk and no drainage tube put in; antiseptic dressings were applied and the patient put in a warm bed. The duration of the operation was two hours, and most of the time the pulse could not be counted. Stimulating hypodermics were given, and he was kept surrounded with hot bottles and given hot water enemata. He rallied after awhile and spoke with his sister, and the heart's action improved, but soon he became restless, and died three hours after being put to bed. During the anæsthesia both chloroform and ether were given.

Remarks.—In this patient collapse was the most prominent condition, partly due to the rough trip, but mainly to the loss of blood. The transfusion of a saline solution might have improved his condition. In operating the first thing to do was to check hæmorrhage, and with that in view, the intestines were rapidly delivered and the bleeding vessels caught; after which the injuries were repaired, this being a long and tedious process, as the perforations were large and ragged. In suturing, I commenced about ¼ inch from the margin of the wound, and after taking the first stitch, tied the thread, leaving the free end about 6 inches long; then continuing with the suture beyond the opposite margin of the wound, and returning with the Lembert suture to the point of starting, and there tying with the free end. In this way each perforation was rapidly and doubly sutured and the thread tied securely. A drainage tube should have been used, but having none at hand, and hurrying to get the patient off the table, I closed the incision, but with the intention of introducing one later, should there be any indication for so doing. The bullet passed from left to right, and downward and backward. The hæmorrhage, I feel sure, was the main cause of this patient dying so soon; the length of the operation with its consequent manipulation and exposure, and the long anæsthesia were, of course, additional factors in hastening death.

Case 2.—D. J., white, æt. 25, strong and muscular, was first seen in a saloon at 10 P.M., November 6, where he had been shot with a 38 calibre pistol about a half-hour before; he was drunk, and had been since early morning, and had eaten nothing. After being shot he was laid upon a box in the back part of the room, where he was when I went in. The wound was one inch below and three posterior to the left ant. sup. spine of the ilium, and just below the liver and under the skin, and three and a half inches to the right of the median line the bullet could be distinctly felt.

He was shot while leaning upon the counter, and the ball had traversed the abdominal cavity from below, upward, and from the left to the right side. His pulse at this time was less than 100, strong and regular; no vomiting had occurred, nor was there much evidence of shock; he was restless and talkative, and complained of abdominal pain, and begged that I should give him relief. A third of a grain of morphine was injected, and his friends were instructed to carry him home, which was about a mile off, which they did, after placing him on a mattress in a wagon. I returned to the office for assistants and instruments. Drs. Coleman and Molloy accompanied me to his house and there we found him resting quietly and under the influence of the morphine, apparently no worse from the ride in the wagon.

The wound was again examined, and by enlarging it slightly I succeeded in following the track of the ball through the ilium and demonstrating that the abdominal cavity had been entered. After consultation, laparotomy was agreed upon, but owing to the unfavorable surroundings at his home it was thought best to have him taken to the hospital. He was therefore again put into the wagon and taken to the hospital, reaching there about 1 o'clock in the morning.

At this time there was more evidence of shock, the pulse was 120, and much weaker; he had vomited several times, and his expression had become anxious and his movements restless, and he complained more of abdominal pain.

Chloroform was administered, and at 2 o'clock, by gas and lamplight, I began the operation. Hands and instruments were scrubbed in carbolized water, and the patient's abdomen thoroughly cleansed and shaved. The incision extended from a little below the ensiform cartilage to near the umbilicus, and on incising the peritoneum considerable gas and blood escaped; the intestines presented at the opening and it required great care to prevent their being forced out upon the abdomen. The cavity contained about a quart of bloody fluid, but no fecal matter was seen. The small intestines were first examined, and nine perforations found; other viscera liable to injury were seen as best I could through the incision, but no wounds were found, save those of the small intestines and several of the mesentery. A branch of the superior mesenteric artery was found bleeding and it was tied with fine silk. Six of the perforations were sutured, as in the previous case, using very fine carbolized silk; the other three being close and destroying a large part of the bowel lumen were resected, about 4 inches of the gut being cut out, and with it a triangular piece of the mesentery. The resected ends were united with the Czerny-Lembert suture and the cut surfaces of the mesentery were carefully ad-

justed and sewed; two small vessels were divided and tied with fine silk. The intestines were protected during the operation with warm wet towels, and were manipulated as little as possible. The peritoneal cavity was then sponged out, and after considerable manipulation and many futile attempts at replacement the incision was enlarged to 7 inches, and then only after puncturing the canal and evacuating the gas, did I succeed in returning the intestines to the cavity, at least a half hour being spent in this effort.

In closing the incision several relaxing sutures were used before the edges could be coapted, and during the entire time great difficulty was experienced in retaining the intestines in the abdominal cavity. The wound through the ilium was left open. The bullet was removed through an incision over it. The operation lasted two hours, and towards the end the patient became collapsed, and stimulating hypodermics were freely given. Antiseptic dressings were applied and he rallied fairly well after being put to bed and surrounded with hot bottles. About an hour afterwards he became delirious and force was necessary in preventing his getting up; so violent was he that morphine was injected.

At my first visit, five hours after the operation, he was resting quietly, with favorable symptoms, later during the day he became restless, vomited a little, and complained of some abdominal pain. He died fifteen hours after the operation.

Remarks.—In this case there was much of interest: first, there was but little shock; second, the incision was above the umbilicus and bisected the track of the ball; third, there was extreme rigidity and retraction of the abdominal walls; fourth, resection of the gut was done; fifth, the intestines were with great difficulty returned to the abdominal cavity; sixth, the peritoneal toilette was imperfect; seventh, the incision was sutured with difficulty; eighth, there was violent delirium after being put to bed.

The absence of shock was prominent, and adds to the evidence that lack of this symptom should not have too much weight in estimating the injury done by a ball. The incision above the umbilicus, I believe, was unfortunate, for being near the muscular attachment the rigidity of the walls was great and the unyielding opening made it almost impossible to examine for or to repair the injuries. The incision had to be enlarged to 7 inches before the intestines could be returned, and even then they had to be punctured. Time could have been saved and manipulation lessened had the incision been, in the first place, below the umbilicus, and then, if necessary, extended up. Three of the perforations were so close that resection was deemed advisable; in a similar case I should suture the wounds, and if the calibre was too much diminished, should make an anastomosis above and below the constriction, using plates, as recommended by Dr. Senn.

The great difficulty experienced in keeping the intestines confined made it impossible to clean the peritoneal cavity. The delirium was due largely to whiskey; death to the extensive wounds, to the duration of the operation, and its necessary attendants, and probably occurred before there was septic peritonitis.

Case 3.—D. J., mulatto, æt. 29, was shot in the country on December 25th, at 10 o'clock in the morning. He was drunk at the time, and after receiving the wound walked several hundred yards. He came to Lexington in a wagon, and Dr. Willis was called to see him. I saw him at 2 P.M., and he was still quite drunk. There was no shock, and he complained little of pain. Two and a quarter inches to the left of, and a half-inch below the umbilicus was a bullet wound, and through it a probe passed into the abdominal cavity. An exploratory incision was decided upon, and everything gotten ready as quickly as possible. Assisted by Drs. Willis, Molloy, and Brock, I began to operate at 4 o'clock, six hours after he received the wound. Chloroform was administered, and an incision was made in the median line, between the umbilicus and pubis, about 4 inches long. A loop of the small intestines was brought into the opening, and starting from this point I traced the tube above to the duodenum and below to the cæcum, but found no injury. There being a little blood in the peritoneal cavity, it was sponged out and the incision sutured with silk. Boiled water filtered through flannel was the only kind used. The operation lasted about an hour, and the patient rallied promptly. Antiseptic dressings were applied and he was put to bed. During the night he became quite restless, vomited several times, and the temperature went up to 100. A ½ grain of morphine was given by mouth, and he became quiet.

December 26th, 11 A.M.—Patient doing well; no pain; normal pulse and temperature. From this time everything was favorable; the stitches were removed on the ninth day; twenty days after the operation he returned to the country, against my advice, but when last heard from was well and doing hard work. After the first twenty-four hours small quantities of milk were given, and at the end of two days the food was gradually increased to its normal quantity. Castor oil was given on the fourth day and the bowels moved several times.

Remarks.—The location of the wound and the fact that the abdominal cavity had been entered, were my only reasons for opening the abdomen; then, an exploration, cleanly and carefully done, did not, in my opinion, add much gravity to the case. Senn's hydrogen-gas test for perforation might have been preferable to exploration, but I was not prepared to make it.

Case 4.—J. J., Negro, æt. 25, shot at 10 P.M. April 22; seen by me at 2 A.M. the 23d. Was

then resting quietly and with but little shock; no vomiting had occurred, and there was nothing to indicate serious injury. One and a half inches below the ensiform cartilage, and one and a half to the right of the median line, there was a bullet wound, which passed direct into the abdominal cavity. I left, with the instruction to have things ready for an operation at nine o'clock.

At 11 A.M., thirteen hours after the wound was received, I made an exploratory incision four inches long in the median line, from the ensiform cartilage down. On opening the cavity considerable blood and bile escaped; and introducing my finger I felt a wound in the liver. The ball had passed through the right lobe, a little to the right of the suspensatory ligament, and had cut one of the bile ducts; the gall-bladder was intact, but empty. Hæmorrhage continuing, I decided to plug the wound with bichloride gauze, but to do this I was forced to make a cross incision of two inches, which divided the right rectus muscle below the cartilage. I succeeded in stuffing gauze in the anterior part of the wound and in controlling the hæmorrhage; the end of the gauze was brought out at the upper part of the incision. The posterior part of the wound was hard to get at, and as but little blood came from it, I left it without interference.

The peritoneal cavity was irrigated with two gallons of warm water and sponged out fairly clean. The incision was closed with silk and a rubber drainage-tube put in; iodoform was sprinkled over the wound and bichloride dressings were applied. Chloroform was the anæsthetic; operation lasted one hour, and the patient rallied well. He did well for two days after the operation; jaundice was then marked, and he became restless and delirious. He continued in this condition until the 28th, nearly five days after the operation, when he died. Bowels were moved frequently with glycerine enemata; urine contained a great deal of bile.

Remarks.—Considering the quantity of bile in the peritoneal cavity, the shock was very slight. All agree that bile extravasation renders a case almost hopeless; several notable exceptions are, however, referred to in "Greig Smith's Abdominal Surgery." In one, forty-seven pints of what seemed to be bile were drawn from the peritoneal cavity by Thiersch. The hæmorrhage from the liver was successfully controlled by stuffing the wound with bichloride gauze. There was never the slightest abdominal tenderness or distension, and the temperature never exceeded 99. The patient suffered more with pain in the right shoulder than he did from the wound.

In my opinion this patient would have recovered had not the bile duct been cut, and I feel sure that his death was due to cholæmia.

GENERAL REMARKS.

Dr. Coley, in the *Boston Medical and Surgical Journal*, gives to Baudens, of France, the credit of having done the first laparotomy for penetrating shot wounds of the abdomen, in 1836. He says: "Baudens boldly opened the abdominal cavity, resected eight inches of the small intestines, and united the edges with the Lembert suture. Although the patient died on the third day, the autopsy revealed a wound of the cæcum which had not been discovered at the time of the operation, and fæcal extravasation in the abdominal cavity. His second case proved to be a wound of the transverse colon. The abdominal wound was enlarged, intestine sutured, and the patient recovered."

Dr. Kinlock, of Charleston, S. C., did this operation in 1881; and Kocher, of Berne, Switzerland, had a successful case in 1883. In this country Dr. Bull, of New York, met with the first success in 1884. Since then many operators have entered the field, and in Dr. Coley's article he gives tables containing 74 cases, with 39.5 per cent. recoveries. Under the "let alone" management of such cases, the recoveries were less than 10 per cent. He also points out the importance of operating early; in those cases operated upon within twelve hours after the wound had been received, the per cent. of recoveries was much greater than in those operated upon later.

With such a difference in the mortality, there can no longer be doubt as to the propriety of opening the abdomen when penetration has occurred, and surgeons are almost unanimous in advising laparotomy when there is strong evidence of the viscera being wounded. I might go farther and say, the fact that a ball had penetrated the abdominal cavity in a location where visceral injury is probable, should justify the surgeon in making an exploratory incision, even when the symptoms indicate no serious damage. Dr. Jos. M. Fox reports a successful case where two perforations were found in the small and two in the large bowel, and the only indication for operation was "the fact that the ball was found to have entered the abdominal cavity."

There was but little shock in my second case when I was first called to him, and in the third none at all. In the second I found great traumatism; in the third, no injury had been done the viscera, but my exploration did no harm, and the patient made a rapid recovery. Others have opened the abdomen and have found no viscera wounded, but all of the cases, I believe, have recovered after the exploratory operation. In one case mentioned by Dr. Mears, in his article in the *Annual of the Universal Medical Sciences*, the counsel, to defend his client, plead on the ground that the attending physician had failed in his duty, by not opening the abdomen and repairing the wounded viscera.

We now have a reliable test for perforation of the alimentary canal by the use of hydrogen gas,

as recommended by Senn. Several cases have been reported where perforation has been demonstrated, and Dr. Senn reports a very interesting one in which, after closing eleven perforations, he was enabled to find the twelfth in the upper part of the rectum, by the gas continuing to escape when forced into the bowel. This patient recovered.

When first called to a case of gun-shot wound of the abdomen, the thing to ascertain is: whether the peritoneal cavity has been entered; and, to do this, it may be necessary to enlarge the bullet wound and follow it through the walls. I have met two cases recently, of abdominal wounds, where the cavity had not been entered, although the wound in each case was near the umbilicus, and in one there was considerable shock. In following the track of the bullet, important evidence may be gained by noting the direction taken, and this will aid us in estimating the damage done in the cavity if it has been entered. In doing laparotomy for penetrating wounds of the abdomen, we should be fully equipped, that every advantage for recovery may be given that the surgeon can possibly offer. Cleanliness here, as in all abdominal operations, is essential, and any neglect in cleansing ourselves, instruments or patients, is scarcely short of criminal.

Water, boiled and strained, will answer for the peritoneal cavity, and I prefer not to add an antiseptic; a 5 per cent. solution of carbolic acid is best to cleanse the hands and instruments. Operators are almost unanimous in advising the median incision in this operation, and there can be no doubt but in the large number of cases this incision will best serve the surgeon. Dr. McGraw, of Detroit, in an interesting article published in the *Medical Record*, on "Some Points on Laparotomy for Visceral Injuries," disapproves of the incision being so invariably made in the median line. He discusses this fully, and cites a case where the ascending colon was perforated, and he succeeded in easily suturing the perforation by enlarging the bullet wound over the colon; had he made the median incision this would have been impossible, without making the incision very long. Unless there is strong evidence, however that the ball has injured structures only far to one side, or that one of the immovable organs has been wounded in a part far from the median line, I should employ the short median incision; even a long median, if the viscera could be repaired through it, I should prefer to one considerably shorter to one side. An incision through muscles causes them to contract, the abdominal walls to become rigid, and manipulation difficult; and besides, through a small incision to one side it is almost impossible to make a clean peritoneal toilette.

In my second case the operation was prolonged and great difficulty encountered in returning the intestines to the cavity, owing to the rigidity and retraction of the abdominal walls. I attribute this condition to having made the incision high up, consequently near the muscular attachments; and to the fact that the ball had plowed through the abdominal muscles to the right of the median line, and had caused them to contract tonically. If possible we should, as soon as the peritoneal cavity is entered, find the course taken by the ball, and by carefully examining the wound—I refer, of course, to those cases where there is but one—and noting it carefully, first at the point it enters the wall and then at the point it leaves it to enter the cavity, we will usually be enabled to form a good idea of the course that has been taken. Muscular contraction and change in the patient's position may cause a change in the relative position of the two openings; but frequently the information gained will be satisfactory. If the direction is ascertained, then only those viscera possible to be injured should be examined, and no others manipulated.

Should we be in doubt as to the course of the ball, it may be necessary to examine most of the viscera, and to do this a long incision will be necessary. To deliver the intestines, and keep them out any length of time, even when surrounded by warm towels, will cause marked shock, and if possible, only the loop being sutured should be out of the cavity, and it should be returned before another is delivered. Care in preventing intestinal exposure, and in manipulating but little, is very important. Dr. Senn observed that dogs would frequently die from shock after the intestines were exposed for a half hour, and I see no reason why it should be different with man. In most cases the jejunum and ilium must be examined, and it is best to catch up a presenting loop, and to trace the tube first in one direction and then in the other, using care to return the examined loop as the next is brought in view. An assistant can usually with sponges keep the opening closed and the intestines in the cavity, except the part being operated upon. In case of hæmorrhage the intestines must be delivered rapidly and the bleeding vessels controlled, as in my first case, and sometimes, owing to the rigidity of the walls, the intestines will be forced out of the cavity, as happened in my second case.

All other viscera in the bullet's course should next be examined, by sight if possible, if not by sight, by touch; and if injury be found, it may be necessary to enlarge the incision before suturing can be done. The Czerny-Lembert suture will close securely all perforations of the hollow viscera, and I prefer the continuous suture, as it can be applied more rapidly. Dr. Senn recommends that "omental flaps" be applied over the sutures after circular entrorrhaphy, among other reasons, it being an additional safeguard against extravasation. All wounds of the mesentery

should be carefully coapted and sutured. In those cases where the mesentery is extensively lacerated at its junction with the intestines, and the blood supply cut off, resection should be done. In resecting, we can use the Czerny-Lembert suture, or better than that, Jobert's invagination suture as modified by Dr. Senn. In wounds of the solid viscera, when the hæmorrhage can be stayed, the prognosis is more favorable. In liver wounds, uncomplicated by other visceral injuries, the majority of cases have recovered. To stop hæmorrhage, deep sutures should be used if possible; if this cannot be done, then the cautery should be applied or the perforation stuffed with iodoform gauze, as has been successfully done in a liver wound. If hæmorrhage continues from a wound of either the spleen or kidney, it may be necessary to remove the organ. Dr. Parkes lost a case from hæmorrhage from the kidney, his patient living twenty-four hours; and Dr. Keen removed a kidney successfully, his patient living fifteen days, death being then caused by gangrene of a contused wound of the mesentery setting up septic peritonitis. Should the gall-bladder be wounded and the bile extravasated, the prognosis is most grave, death being almost inevitable. Greig Smith, in his "Abdominal Surgery," mentions a case recorded by Paroisse, where a ball remained in the gall-bladder for two years before death. We may, in perforations of this viscus, either suture the perforation or do a cholecystectomy.

Wounds of the urinary bladder should be sutured, and if the peritoneal cavity is not infected by urine, the patient may recover.

Besides the cases above mentioned, I know of but one other laparotomy for gunshot wound of the abdomen in Kentucky, and that was a case reported by Dr. Isaac Warren, of Somerset. He operated twenty-four hours after the patient was shot. The small intestines were perforated five times; the patient died of peritonitis fourteen hours after the operation.

REPORTS FROM HOSPITALS.

SURGICAL CLINICS AT THE WESTERN PENNSYLVANIA HOSPITAL BEFORE THE STUDENTS OF THE WESTERN PENNSYLVANIA MEDICAL COLLEGE.

BY PROFESSOR J. B. MURDOCH,

SURGEON TO THE WESTERN PENNSYLVANIA HOSPITAL AND PROFESSOR OF CLINICAL SURGERY IN THE WESTERN PENNSYLVANIA MEDICAL COLLEGE.

[Reported by WILL. N. PRINGLE, M.D., a member of the Graduating Class.]

January 12, 1889.

AMPUTATION OF THE FORE-ARM.

We have a patient here this morning who has had his hand traversed by a car-wheel. This happened about two hours ago, and illustrates, very forcibly, the condition in which you will find a limb after an accident of this kind. You will frequently hear people say when they see a contused limb that, "it was merely grazed by the flange." Now this is an impossibility. I think that all of you know that the flange of a wheel is on the inner surface of the wheel, and travels along the inner edge of the rail, so that in order to be "grazed by the flange" the limb must be traversed by the tread of the wheel, or his body must be entirely under the car. A limb may also be caught and pushed along in front of the wheel, for a short distance, and then thrown from the rail. This may cause a very extensive contusion, so that you may even be at a loss to know, whether, or not, the wheel passed over the limb. This you may always ascertain by examining the bone, which you will find crushed, and finally comminuted where traversed, by the wheel, but where the limb has been merely shoved in front of the wheel, and thrown from the rail, you may find the bone fractured, in several places perhaps, but you will not find it crushed into fine fragments.

Before the days of antisepsis, we used strips of adhesive plasters in dressing these wounds, we formed our flaps, placed a few sutures, then covered the stump with adhesive strips. We do not use the plasters now, but we sew up our wound a little more carefully. One reason why we no not use plasters is because they make a filthy dressing, and another is, because of the septic material in the plaster. In those days we shaved the limb, carefully to facilitate the removal of the plasters, we still continue to shave the limb, not so carefully, however, and principally for the sake of cleanliness.

In amputations of the forearm, I prefer the modified flap operation. You grasp the limb between the thumb and forefinger, of your left hand, at the point where you intend to saw the bone off. You then make your flaps by making incisions between the points where your thumb and forefinger rest, on the limb. You then dissect up the skin, turning it up as you would the sleeve of your coat. I also like to include part of the muscle, because if you dissect the skin up by itself, you sever all of the little vessels that go to its nourishment. I prefer the modified circular operation, because you cut the arteries at a right angle, and you make a less wound in the skin. After you have turned the skin up sufficiently, you make a circular incision of the muscles, cutting everything down to the bone, then pass the knife between the bones, cutting the interosseous membrane. You then saw off the bones, and there is a right and a wrong way to do this. I begin by placing the heel of the saw on the radius, then draw it back, making a track for your saw.

After your saw is well started in the radius, depress the handle and make a start in the ulna, then return and sever the radius, and last of all the ulna. Do not saw rapidly as the ends of the bones may be burned by the friction of the saw. Bite off all sharp angles or points of bone, with the bone forceps. In controlling hæmorrhage, I twist large arteries, and for capillary oozing, hot water is generally sufficient. A drainage tube is then inserted, and the wound is closed. In wounds like this, I like the seamstress' stitch; do not make the mistake of using the glover's stitch, or the stitch used in sewing covers on balls, for seamstress' stitch; if you do, you will not bring your edges into close apposition. Do not sew up a wound too tightly. Always make allowance for more or less effusion and wound tension.

OPERATION FOR FISTULA IN ANO.

We have another case to show you, that of a man with a fistula in ano. These, as you know, are caused by traumatisms, foreign substances in the rectum, and various other ways. An abscess first forms in the vicinity of the anus, pus accumulates and travels in the direction of the least resistance, which is usually in the direction of the rectum, although they also frequently open externally. After they have once opened into the rectum, the irritation from fæces entering the canal, together with the movements of the bowel, and the contractions and relaxations of the sphincter ani, interfere continually with repair, and they do not heal until the sphincter ani is divided.

You notice about this anus a peculiar growth, resembling somewhat a rose in appearance, then a condylomata, or mass of syphylitic warts. These must be handled with great care, as they possess the power of innoculating syphylis through a wound in the skin, or through an abrasion on the hands of the operator. You also see an opening in the skin on the left of the median line, and two inches from the anus. This is the external opening of the fistula, a grooved director passes in at this opening, and readily passes through and out at the anus. The director now lies in the track of the fistula, and with a scalpel I will incise all of the tissue that is lying over the director. This constitutes the operation for fistula in ano.

I find another small opening in the skin, on the right hand side of the median line, and about two inches from the anus. In this case I am unable to find an internal opening, but as the part is all undermined here with pus, I will make an internal opening, by forcing the director through into the rectum. This side will be incised as was the other. The after-treatment of these wounds, will be of more importance, than the operation. They must be kept thoroughly cleansed by frequent washings with antiseptic fluids, and they must be kept packed with iodoform gauze, in order that repair may take place from the bottom. These condylomata will be removed by the scissors, and their seat cauterized, and when they begin to granulate they will be occasionally touched with nitric acid, nitrate of silver, or other caustics. This man will be put upon proto-iodide of mercury, which will be pushed until his gums are slightly touched, and if he does not improve on this he will be given mixed treatment. A favorite plan of mine is to take a piece of blue ointment the size of a chestnut, and rub it into his back, and repeat this each evening. This, together with the exhibition of iodide of potassium internally, I consider an excellent mode of treatment.

January 19, 1889.

OPERATION FOR HARELIP.

I have to-day a case of harelip to show you. The patient is a boy about 6 years old, and is brought here for operation by his father. Besides the harelip, he has a cleft of the palate. Instead of the double fissure in the lip as is often the case, he has but a single fissure, and where this is the case, it is almost always on the left side. You have seen Professor King operate on several cases of harelip during this term, but my manner of operating is somewhat different from that of Professor King. As a preliminary step I pass a loop of string, or ligature, through the lower angles of the lip, on either side of the cleft, not for any part it takes in the operation, but for the purpose of holding the parts out of the way. This is better accomplished in this way, than it could possibly be by the aid of forceps. I then dissect the lip loose from the superior maxillary bone, on either side of the fissure, so that they may be drawn together with greater facility, in closing the fissure. The next step in the operation, is to pare or denude the edges, that are to be brought into apposition. This is done by transfixing the lip just at its vermilion border, or just where the skin and mucous membrane meet. This should be done with a narrow, straight bistoury. The incision should then be carried well up to the nostril or to the extreme limit of the fissure, then cut off. The other side of the fissure, is then to be treated in like manner, and the two thin strips that have been pared off brought down so that they hang in front of the mouth. This constitutes the third step in the operation, and the loops through the angles of the lip, having subserved their purpose, are now removed. The lips having been previously dissected loose from the superior maxillary bone, are readily brought together, closing the wound. Here also surgeons differ, in the manner of retaining the parts, some prefer the wire suture, passed through the lips, while others prefer the silk or horse-hair ligature. For my part I prefer the harelip pins and a cotton cord ligature. I

prefer the cotton ligature, because it is a little more elastic, and a little softer, and not so likely to cut into the tissues. The first pin is passed just at the vermilion border of the lip, it should go deeply into the tissues of the lip, but should not include the mucous membrane of the mouth. It should pass across the wound, and emerge from the skin, at a point corresponding exactly with the point of entrance on the opposite side. The other pin is passed in like manner, near the upper border of the wound. It is not necessary to wait, for the hæmorrhage to cease entirely. Bringing the parts together with the pins, is usually sufficient to stop the hæmorrhage, if any remain.

You now notice a projection downward in the line of the wound. This is caused by union of the two strips pared from the sides of the fissure, and they will be made to fulfil a good purpose here, because in a great many of these operations a notch is left after the wound heals. In this case, part of this projection will be left here, so that after repair has taken place, enough of it will remain, to prevent a notch being formed. Now in addition to the two pins, I will put a wire suture through the wound, for additional support, and two or three sutures of fine silk, through the mucous membrane of the projecting part, to hold it in apposition. The pins should not be allowed to remain too long, or they will leave marks, after the wound has healed; on the other hand, if they are removed too soon the wound may come apart, so it is a very nice point to know just when to remove them. Mr. Holmes asserts that he removes the pins in twenty-four hours, while others allow them to remain for several days. There is no rule in regard to this, but they should be removed as soon as they can be dispensed with. I cut off the heads, and points, of the pins, and to prevent the projecting parts from sinking into the skin, I put small bits of plaster under them. For additional support, I draw narrow strips of adhesive plaster over the wound, from side to side.

THE OPERATION OF CIRCUMCISION.

I have another case to show you to-day, that of circumcision. It is said that this operation was first done by Moses, but I believe that it was done in Arabia, long before the time of Moses. At all events you know that there are fashions in surgical operations, as well as in the cut of your wearing apparel. This operation seems to have again come in fashion, within late years. A long prepuce of course is an annoyance, to a man all through life. Besides that from phimosis, and paraphimosis, it is exceedingly filthy, and frequently leads to disease. There is, however, some points in favor of the long prepuce. It was put there for some good. Without it the meatus may become contracted from friction with the clothing. In covering the glans it serves to keep that part more tender, and sensitive, thus rendering copulation more desirable, and conception more certain. Therefore I think that the operation should not be advised unless there be some good reason for it, other than that of being in the fashion.

This boy, about 15 years old, has been in the medical side of the hospital for some time. A few weeks ago, it was noticed that he became nervous, restless and sleepless. Later he became delirious, which continued until he had to be confined to the cell. An examination showed that he had a very long prepuce, and phimosis. I do not know that this is the cause of his nervous trouble, but our reason for doing the operation is based on sufficient absolute authority, to justify us in doing it. Do not think, however, that every boy with a long prepuce has phimosis, or even an abnormality. This is the normal condition in young boys, In doing this operation, it is well to make a mark with ink at the point where you intend to divide the foreskin. The part is then placed between the blades of Ricord's forceps, and all in front of the forceps is cut off. The skin is then reflected behind the glands, but the mucous membrane will remain. This is then cut or torn, and reflected back with the skin. The skin and mucous membrane is then sutured together, and this is usually done with the horse-hair suture. In the Jewish rite, the Rabbi does not sew the skin and mucous membrane together, and I would not advise you to do it, in very young children. This constitutes the operation. This boy will be given medical treatment, and it remains to be seen what effect it will have on his reason which, as I told you, is entirely lost.

MEDICAL PROGRESS.

ON THE PROGNOSIS OF HEART DISEASE.—LEYDEN reverts once more to the question how long the period of complete compensation of a cardiac lesion can last. Supposing, for instance, that in a patient with cardiac lesion the compensation is altered. This alteration admits of three phases:

1. It is slight and manifests itself only by inability to work.
2. The trouble of compensation is complicated by dropsy.
3. Dropsy is accompanied by visceral congestions, asystole, etc.

This latter phase is beyond the physician's skill; only the first and second are susceptible to therapeutic measures.

The first question to be asked is regarding the cause of the break in the compensation; whether it is the result of a progress of the cardiac lesion

or of an accidental cause: fatigue, excess, overfeeding, additional disease, gravidity, etc. A conclusion of the utmost importance for prognosis may be drawn from the effect of the cardiac medicines, from which we may easily judge of the condition of the cardiac muscle. Oertel notes in his cardiac patients the daily quantity of liquids introduced and excreted, as in these cases the prognosis depends largely upon the difference between the introduction and excretion of liquids; the greater this difference the less favorable is the prognosis. The same inference may be drawn from the action of digitalis: the prognosis varies according to whether this substance acts rapidly or slowly, or not at all.

As regards physical symptoms of heart disease I have already stated that changes in the volume of the heart must especially be noted. While the heart tones have no especial prognostic value it may be said, in a general way, that the systolic murmur is less grave than the diastolic. It is certain that in many cases systolic murmurs may exist without a trace of cardiac lesion. To be sure, it is necessary to distinguish here between the systolic murmurs of the orifice of the aorta and those of the apex of the heart, as in individuals of a certain age the systolic murmurs of the aorta lead always to a suspicion of an alteration of the aorta. The prognosis of the systolic murmurs of the apex is, therefore, better. On the other hand, the diastolic murmurs indicate, except in very rare cases, the existence of an organic lesion. To be sure, there are accidental diastolic murmurs, but they are so rare as to be safely ignored for our present purpose.

Let us examine now the anomalies in the rhythm of the heart without organic lesion. The intermittence of the pulse with increase in strength at the moment of resumption induces individuals thus affected to believe that they have heart disease. I do not attribute the least significance to this symptom, which is due, I believe, to a psychical cause or to reflexes originating with the organs of the abdomen. Equally frequent is the arhythmic pulse. There are persons who have had an arhythmic pulse all their lives without being troubled thereby in the least (provided there is no manifest organic lesion of the heart). I consider the prognosis in such a case favorable, but the complete disappearance of this arhythmia is very rare.

Delirium of the heart (or, as ancient authors call it, *tremor cordis*, because the rhythm could not be perceived), is a more serious affection. It cannot last very long without affecting the heart seriously.

Tachycardia, that is, a perceptible increase in the frequency of the pulse, depends physiologically upon a paresis or a paralysis of the vagus nerve. It is admitted that prolonged increase above 120 pulsations is dangerous, but 130 to 140 pulsations have been observed without death following. I observed once a pulse of 140 for four weeks, at the end of which period the patient died. In individuals affected with Basedow's disease the frequency of the pulse is always very great; above 160 it becomes dangerous to life. Once I saw a pulse of 200 in a patient affected with Basedow's disease, who died a few days afterward. In tachycardy febrilis the prognosis becomes serious as soon as there are more than 120 pulsations a minute. This kind of tachycardia may vary a great deal with different individuals and according to the disease. It is hardly necessary to mention the great frequency of pulse during the first period of acute exanthemata without the prognosis being unfavorable on account of it. There exists also a paroxysmal tachycardia in this sense, that the rapid pulse appears only at intervals; it is frequent in neuroses of the heart, and not dangerous because transitory. Tachycardia in convalescents appears in consequence of the slightest psychical or physical effort.

Bradycardia is seen in patients with icterus, and is generally rather a serious symptom. The brachycardia following the administering of digitalis, as also that which complicates angina pectoris, are well known. Physiologically, I mention here that ligature of the coronal arteries produces likewise a brachycardia. When patients are required to take digitalis for a long time the frequency of the pulse diminishes. Permanent brachycardia; that is, the rapid slackening of the pulse which falls to 30 or even 20 pulsations, was first described by Stokes; it is complicated with syncope, convulsions which seem to result from anæmia of the brain.—*La Semaine Médicale*, May 15, 1889.

L'Hydroxylamin in Dermatology.—P. J. Eichhoff, in *Les Nouveaux Remèdes*, recommends this substance for the treatment of skin diseases. It appears in the form of colorless hygroscopic crystals, easily soluble in water, alcohol and glycerine. It is an active reducing agent, forming in the blood methæmoglobin. It produces hæmaturia by destroying the blood corpuscles when introduced into the blood in doses exceeding 1 centig. for each kilogr. of animal. Besides it acts as a narcotic on the nerve centres. Because of its pronounced reducing qualities this substance recommends itself as an excellent topical application in parasitical skin diseases. Eichhoff especially likes the chlorhydrate in the following formula:

Chlorhydrate of hydroxylamin . .	0.1 gr.
Alcohol or glycerine.	50.0 gr.

For external use.

After washing the affected portions of the skin with soap they are painted from three to five times daily with the alcohotic solution of hydroxylamin. This alcoholic solution being very irritating and poisonous, at the beginning no

stronger solution than 1:1,000 should be used, and not until later, when no harmful secondary symptoms have developed, may a stronger solution be resorted to. Eichhoff treated in this way five cases of lupus vulgare, five cases of herpes tonsurans, and one case of parasitical sycosis of the face. The results were especially encouraging in lupus; even after eight days of treatment a reduction of the hypertrophied portions was noticed, and a cure with smooth scar was effected inside of four weeks. In herpes tonsurans the hydroxylamin at first greatly irritates the skin, but the final result is none the less satisfactory. The author intends to use the substance also in other diseases, such as psoriasis.—*Journal de Médecine de Paris*, May 12, 1889.

PUERPERAL FEVER.—DR. A. HACHSTEIN, in *American Lancet*, says: The whole substance of the prevention of puerperal septicæmia is: Do not allow any poison to be near a puerpera, or if there is any do not permit it to enter her genital tract. But if regardless of all our precautions the poison has entered the genital tract, destroy it before it gets into the system.

This latter is the whole essence of therapy in this disease. Thus the most efficacious treatment will be a local one. Disinfecting vaginal injections will remove the poison from the wounded structures in the genital canal, and at the same time ward off the immigration of new poisonous matter. If pieces of membrane or of the placenta are left in the uterine cavity to decay, intra-uterine irrigation used two or three times will do the best service; if not sufficient, curetting should be resorted to. If the poison has entered the system, and we have to deal with general peritonitis, laparotomy should be taken into consideration.

In general treatment we all have been accustomed to rely greatly on opium. As for my part, if I had to treat a case of puerperal septicæmia now, I would not seal up the primæ viæ and so allow the ptomaines to remain in the system, by giving the opiates; but I use the salines from the beginning.—*Archives of Gynæcology*, May, 1889.

THE DISAPPEARANCE OF CARDIAC MURMURS.—DR. M. A. BOYD, of Dublin, at a recent meeting of the Royal Academy of Medicine in Ireland, read a paper on the disappearance of cardiac murmurs which have existed sufficiently long and have led to such changes in the cardiac walls as to be considered organic in character. Such disappearing murmurs are generally consecutive to acute rheumatic endocarditis; cases also occur of chronic endocardial changes which ultimately leave the heart free from all traces of disease. Dr. Boyd gave three instances of cases under his own observation—one of the murmur of mitral regurgitation, with consecutive changes in the left ventricle and auricle, which existed for two years, and ultimately disappeared, as did the hypertrophy associated with it; and two others of aortic regurgitation existing for a considerable period, which finally got quite well also. In both these latter cases the existence of hypertrophy and dilatation of the ventricle might be taken as sufficient evidence that they were of a permanent nature, as also the length of time they continued after the primary endocarditis. A well-established constrictive murmur, in his opinion, never gets well; it may disappear or cease to be heard, owing to failure or weakness of the cardiac walls, or to excessive dilatation either of these or the aorta, but the symptoms associated with it remain, and *post-mortem* evidence shows no cure. Plastic material deposited on or in valves may ultimately get absorbed when it only interferes with their adaptation, but when deposited around the margin of an orifice it must ultimately, by its contraction, cause obstruction. Such absorption is most likely to take place in young subjects, owing to the rapid metabolic changes which occur in their tissues and to compensation being more easily established; and is more frequent where the valvulitis is rheumatic than where it is the result of alcoholism, gout, or contracted kidney.—*The Medical Press*, March 13, 1889.

PRECOCIOUS MENSTRUATION: AMENORRHŒA WITH CONVULSIONS.—A case of remarkable precocious menstruation is reported by DR. DIAMANT, of Vienna. When a 12-month old, the child had cut all her milk teeth. When barely 2 years of age, the first period was observed. It lasted four days, and recurred with regularity till the child was 6 years old. At that age her breasts, loins, and pelvis were of the adult type; the axillæ and pubes were thickly covered with hair. Suddenly the period ceased, and for six months after the child had completed her sixth year epileptiform convulsions came on during sleep, at every date when the catamenia should have appeared. The fits some times lasted three-quarters of an hour, and increased in number every month. They were continuing when the case was reported, the child being then 6½ years old.—*British Medical Journal*, May 4, 1889.

PHENACETIN IN LOCOMOTOR ATAXIA.—HOTTENSTEIN, records the case of a man, æt. 64, who had a syphilitic history with typical progressive locomotor ataxia, accompanied by exceedingly severe lancinating pains in the legs, arms, and face, as well as the abdomen. In some attacks the bladder and genito-urinary tract were especially involved in the nerve-storm, and violent tenesmus was often present. Phenacetin, in the dose of 28 to 32 grains at the beginning of an attack, always brought relief in less than one hour.—*University Medical Magazine*, Jan., 1889.

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LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, JUNE 15, 1889.

RAILROAD RATES.

We regret to say that the Committee of Arrangements has been unable to secure special rates for those who wish to attend the meeting at Newport. Every reasonable effort has been made to secure reduced rates, and we feel confident that the action of the railroads has not been in accord with their own financial interests. On all these roads excursion rates are given, and doubtless in many cases these may be made available.

MASSAGE IN GYNECOLOGICAL PRACTICE.

A great deal of interest is being manifested of late in the treatment of uterine displacements and inflammatory exudates surrounding the female pelvic organs, by means of what may be called (for want of a better term) pelvic massage.

The principles involved in this method of treatment and their actual application in gynecological practice, while scarcely to be regarded as new have nevertheless only just begun to attract anything like general interest on the part of the profession. For some years past articles descriptive of the application of the methods, with accounts more or less credible of the cures achieved, have appeared in the literature of gynecology and in the near future the subject will doubtless have a literature of its own.

One of the earlier papers on this subject and one that has attracted considerable attention both at home and abroad, is that by Prof. A. Reeves Jackson, of Chicago, entitled "Uterine Massage as a Means of Treating certain Forms of Enlargement of the Womb." This paper was read before the American Gynæcological Society, in 1881. Very recently Prof. Jackson has expressed himself as thoroughly convinced of the efficacy of the method when properly employed. He believes, however, that it requires the manipulations of the skillful gynecologist himself, to secure anything like satisfactory results and that it is quite useless to relegate the patient to the hands of even the most skillful and painstaking nurse.

At a recent meeting of the Chicago Gynæcological Society, Prof. F. H. Martin spoke of the method in warm terms of praise.

At the meeting of the Royal Academy of Medicine in Ireland, April 12, 1889, Dr. Alfred Smith reported the results attained by massage and pelvic gymnastics in six cases of prolapsus uteri. Although his results were not positively brilliant they were, notwithstanding, sufficiently satisfactory to encourage the reporter in the belief that the procedures in question possess a very high degree of efficiency. In the ensuing discussion all who participated, among them Dr. Atthill, expressed themselves as satisfied of the potentialities for good of these plans of treatment, which they welcome as important additions to the therapeusis of conservative gynecology.

In a recent discussion at a Congress of Russian physicians, a large number of cases of prolapse and displacements of the uterus treated in this manner were reported and much enthusiasm was manifested with regard to the results attained.

But it is not necessary to multiply reports of this character. Enough has already been said to indicate the widespread interest manifested. The universal expression of opinion is one indicative of great satisfaction that such a powerful adjuvant to the more familiar practices of conservative gynecology has been discovered.

But singularly enough, and little to the credit of professional gynecologists, this wave of enthusiasm was started by an outsider, so to say, for all unite in yielding the palm to Thure Brandt, of the "Central Institut" for gymnastics in Stockholm, who is not a physician at all, much less a gynecologist!

A very complete and extremely interesting description of Brandt's "hygienic-gymnastic treatment," as it is termed by the Germans, is con-

tained in a very recent publication by Dr. L. Fellner, of Vienna, in the *Klinische Zeit-und Streitfragen*. Dr. F., after having been for two months under the instruction of Brandt, returned to his home full of that kind of enthusiasm which is always infectious, though often somewhat disappointing in the end.

Brandt himself, it seems, had been actively engaged in massage from the year 1844, when in 1847 he was fortunate enough to cure a case of prolapse of the rectum. Later on, in 1861, he made a remarkable cure of a case of prolapsus uteri of twenty-seven years' standing, after a two weeks' course of treatment. This woman, he says, remained free from prolapse until her death which occurred twenty-three years later. Since then his experience with the various forms of uterine displacement and exudates, has been very extensive although for many years his results attracted comparatively little attention from medical men.

However, in 1887, his work having come to the notice of several physicians of eminence, he was introduced through the instrumentality of Profanter, to Prof. Schultze, of Jena, at whose clinic he was accorded full opportunity to display his remarkable abilities both in the direction of gynecological diagnosis and mechanical treatment. This he did to the complete satisfaction of Prof. Schultze and a number of other gynecologists who witnessed his manipulations and have since borne witness to their surprise and gratification in most cordial and unmistakable terms of praise. The reports of the cases treated by him at Schultze's clinic, were published in detail by Profanter together with an introduction by Schultze himself, under the title of "Die Massage in der Gynäkologie von Dr. Paul Profanter" (W. Braumüller, 1887).

This was the real beginning of Brandt's fame; for following Profanter's publication, gynecologists began to crowd in on him to learn his methods and from them, and in turn their pupils, emanate the glowing reports which are becoming so frequent in current literature.

Brandt's treatment includes the following procedures:

1. Various active and passive movements pertaining to the so-called Swedish Movement Cure. These are generally entrusted by him to a female assistant, who applies them according to instructions which are varied to meet the exigencies of each individual case. These do not (so his pupils say) constitute essential features of a rational treatment and may be supplanted by the various hydropathic drink and bath cures dear to the heart of the true German physician!
2. Massage.
3. Stretching.
4. Replacement of the uterus (Redression).
5. Elevation of the uterus (Uterushebung).
6. Pressure upon the pelvic nerves.
7. Abduction and adduction (against resistance) of the knees.
8. Slapping of the back and tapping of the loins and sacral region (tapotement).

Massage finds its application in cases of swelling and thickening of the organs and tissues occurring as a sequence to stasis, chronic inflammations and extravasations, as well as in subacute and acute inflammation.

Stretching is never employed in cases of acute and subacute inflammation, nor in cases of exudation. It is only indicated in cases where the ligaments are relaxed and lengthened, or shortened and contracted.

The recognized indications for massage are: metritis and endometritis chronica, subinvolution of the uterus, hypertrophy and atrophy of the uterus, parametritis, perimetritis, perioöphoritis, salpingitis, pelvic cellulitis, hæmatocele and uterine displacements, in all of which it may be employed as an auxiliary mode of treatment.

The object of stretching is to lengthen the shortened ligaments and to restore tonicity to those that have become relaxed. This procedure is never undertaken during the progress of inflammation, or in the presence of exudates. The principle involved in stretching is that a muscular irritation of short duration excites contraction, while an irritation of continued action induces elongation.

Replacement of the uterus. This is accomplished by various methods and with the patient in one of several positions—standing, knee-elbow, or lithotomy. The recto-vaginal method of replacement is employed in cases where the uterus is enlarged and retro-flexed. The operation is performed with the patient in the knee-elbow position. The operator's finger is introduced into the rectum and the thumb into the vagina, whereupon the fundus is pressed forward and downward

while the cervix is pushed backward and upward.

Ventro-vaginal replacement is practiced in the lithotomy position and is accomplished by the methods of tilting, invagination of the abdominal walls, hooking in of the finger behind the fundus and by the so-called replacement pressure. Tilting is used when the uterine walls are so rigid that pressure on the anterior surface of the cervix suffices to raise the fundus until it can be grasped by the other hand through the abdominal walls. The invagination process is resorted to when the uterus cannot be tilted forward. The fingers of the external hand are made to push back, "invaginate," the walls of the abdomen until the fundus is brought within reach, while the finger of the other hand introduced into the vagina presses the portio vaginalis backward and upward. In this manner the uterus is brought into a position of anteversion.

The "hooking" process referred to, is that which is employed when the uterus is so flexible that pressure on the vaginal portion increases the angle of flexion. The finger is introduced behind the fundus which is pressed towards the abdominal walls until the external hand is able to obtain hold of it.

The "replacement pressure" is exercised when the portio vaginalis is firmly fixed anteriorly. The internal finger presses up on the fundus and holds it in position, while the fingers of the external hand press down over the symphysis upon the isthmus uteri forcing it backward. Thereupon the internal finger of the operator is changed to the anterior surface of the cervix, close under the fingers of the external hand, and for several seconds pressure is made by both hands in a backward direction. Then while the internal finger still continues its pressure, the external hand is made to glide over the anterior surface of the uterus until it reaches the superior margin of the body, when it is turned until the finger-tips are directed forward, when they are made to sink behind the fundus which is then brought into anteversion.

Ventro-vaginal-rectal replacement. This method is adopted when the fundus is so high up that it cannot be reached by the internal finger, in which case it becomes necessary to make it more accessible by downward pressure exercised by the disengaged hand. The patient is placed in the lithotomy position. The left index finger is next introduced as high as possible into the rectum. The fingers of the disengaged hand are then laid upon the abdomen in the vicinity of the fundus and made to execute, under moderate pressure, a circulatory rubbing motion in the direction of least resistance while the effort is made to bring the fundus gradually downward and forward. If it is not possible in this way to reach the posterior surface of the uterus, the effort is aided by the introduction of the left thumb into the vagina the index finger meanwhile remaining *in situ*. The thumb is then employed to press the cervix backward, while the index finger raises the fundus until it can be grasped by the fingers of the unemployed hand when it is in this manner brought into place.

Our limits do not permit the completion of the discussion of this subject in the present issue of THE JOURNAL. In the next number we propose to discuss the method ascribed to Brand, and which no doubt originated with him. The importance of the subject is such that it merits the careful consideration of the profession.

SECONDARY STREPTOCOCCUS PNEUMONIA.

In continuation of his study of diphtheria, PRUDDEN publishes his promised researches on the etiology of pneumonia.[1] He finds uniformly in the fresh exudate in the air-vesicles of the lungs of children dead of diphtheria the same streptococcus which was always present in the pseudo-membrane in the throat. As control experiments, the exudates from cases of pneumonia in children, not secondary to diphtheria, were similarly examined, and in only one case was a streptococcus found, and then in a case complicating erysipelas. The presence of the streptococcus in these pneumonias is adequately demonstrated, and there can be no doubt that it is the prime and essential etiological factor of the local disease. The relation of the streptococcus to diphtheria, however, is probably secondary and non-essential.

These researches on the etiology of secondary pneumonia in diphtheria are in perfect accord with the investigations of the bacterial condition of pneumonias secondary to other infectious diseases. We may refer to Newmann (1886), Manfredi, Tobeitz and A. Fränkel (1887), Guarnieri (1888),

[1] T. Mitchel Prudden and William P. Northrup: Studies on the Etiology of Pneumonia Complicating Diphtheria.—"The American Journal of the Medical Sciences," June, 1889.

and Babes and Raskin (1889). Each of these authors reports pneumonias, secondary to the various acute infectious diseases, the prime etiological element of which was a streptococcus. Fränkel very properly pointed out that the microbe gains access to the body through the atrium furnished by the local lesion of the primary disease.

Babes and Raskin have shown conclusively that the nephritis and synovitis, as well as the pneumonitis which follow the acute infectious diseases of children, are due, in the great majority of cases, to a secondary infection, with the *streptococcus pyogenes*.

While it is greatly to be deplored that any single institution can furnish the material for such extended researches as these of Prudden and Northup, we may take a measure of consolation from the fact that the enthusiasm and scientific courage have of the pathologists have wrung out of wholesale disaster such an important lesson. Let the medical profession recognize in the complications of the acute infectious diseases, a septic process as independent and foreign to the primary disease as suppuration and erysipelas are to the reparative process in wounds, and we shall not wait long for a method of treatment which will banish them to the seclusion which has been sought by the wound diseases and puerperal fever.

THE OPHTHALMOSCOPE.

The ophthalmoscope, at one time considered as nothing but an interesting scientific toy, has become an indispensable instrument in physical diagnosis. Its history is a succession of triumphs. The wonderful progress made within the last thirty years in ophthalmology is altogether due to this instrument. By its means the neurologist has been able to penetrate the mystery which enshrouded many cases of brain and spinal disease, and our knowledge of kidney diseases, secured from the ophthalmoscope a valuable contribution when it revealed the existence and nature of the various forms of ocular disturbances concomitant with and due to nephritic disorders. In view of these facts should not the use of so important an instrument be thoroughly taught in our medical colleges? Should not every physician be equipped not with the instrument alone, but with the knowledge and experience necessary for its practical use. Yet how far we are from this state of things. How few of our graduates know how to "throw light into the eye," and of these how small the number who know what they see in the field thus illuminated. If these men only knew enough to know what they don't know, the case would not be so bad, but ignorance is proverbially arrogant, and hence the mistakes of the ignorant are prone to escape correction. It is really humiliating to witness a graduated physician attempting to examine an eye while the light reflected from the mirror is seen illuminating the wall beyond the patient's head, and how often serious blunders in diagnosis occur is best known to those who have had an opportunity to watch graduates at work with this instrument.

A more thorough instruction in the use of the ophthalmoscope is imperative, and our medical colleges should see to it that the student be thoroughly trained in its use. Of course it cannot be expected that the general practitioner shall be an expert, that should be left to the oculist, but every medical man should at least be able to recognize the difference between a transparent and an opaque lens, a normal papilla and a choked disc, and a healthy retina and one affected with retinitis. Then will men be able to recognize also their limitations, and serious blunders will not be so common. Until this condition of things is brought about we cannot lay claim to that high standard of medical education which should characterize the curriculum of the American medical colleges.

THE DISASTER.

The sympathies of the Nation for the past week have been centered upon the sufferers of the Conemaugh Valley. Ten days have now elapsed since the occurrence of that fearful calamity. The actual condition, sad as it is, is less appalling than at first reported. A conservative estimate reduces the number of dead to about five thousand. From the bulletin issued by the State Board of Health, on June 9th, we learn that the general health in the region of the disaster is excellent; that there is no evidence of epidemic disease; that the whole country has been districted and each section placed under control of a competent sanitarian—and it is confidently believed that the work of reclamation will be carried on so rapidly

and so well that the general health in the locality will be maintained. This is well, and we heartily commend the State Board of Health for this efficient action.

But the question which we wish to emphasize is this: Who is responsible for this wholesale destruction of human life? Had the Valley been devastated by a volcanic upheaval or had a cyclone swept it to destruction, human agency would not be responsible for that which it could not control. But here it is not so. The primal cause of this calamity was the work of human hands. It was legitimately under the surveillance of sanitary inspection. It could have been averted by legitimate authority and somebody is responsible for the loss of these five thousand lives.

EDITORIAL NOTES.

UNIVERSITY OF PENNSYLVANIA.—We learn from a contemporary that the Associate Professorship of Obstetrics in the Medical Department of this University, recently vacated by Dr. Howard A. Kelly who has accepted the appointment as Gynecologist to the Johns Hopkins Hospital, is not likely to be filled. It is understood that Dr. Barton C. Hirst, the present Associate Professor of Obstetrics, will also undertake the duties of Gynecologist.

A TESTIMONAL FREE BED.—The friends of Dr. R. J. Levis, of Philadelphia, the well-known surgeon to the leading hospitals of that city, are desirous of recognizing his distinguished public services by perpetually endowing a testimonial free bed in the Polyclinic Hospital. A committee, during his absence in Europe, are endeavoring to raise $5,000 for this purpose, and think it is eminently appropriate that the testimonial should be donated to the Philadelphia Polyclinic since he was one of its founders, its first professor of clinical and operative surgery, and from its organization has been president of the board of trustees.

The Committee having charge of raising the desired amount request that subscriptions be sent to Dr. H. Augustus Wilson, Treasurer, 1611 Spruce St., Philadelphia.

THE PHYSICIANS OF CINCINNATI and of that vicinity are making up a special train of palace cars, for the purpose of attending the meeting of the American Medical Association at Newport. The President of the Association, Dr. W. W. Dawson, will be a member of the party, and the coach assigned to him is designated—*the President's car.*

MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.—The following changes have been made in the Faculty: Frank Woodbury, A.M., M.D., Honorary Professor of Clinical Medicine. William B. Atkinson, A.M., M.D., Honorary Professor of Sanitary Science and Pædiatrics. John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine. James M. Anders, Ph.D., M.D., Professor of Hygiene and Clinical Diseases of Children.

MEDICO-LEGAL SOCIETY OF CHICAGO.—The annual meeting of this Society, was held on the 1st inst., when the following officers were elected for the ensuing year: President, Dr. E. J. Doering; Vice-Presidents, Dr. Boerne Bettman and Mr. Eric Winters; Treasurer, Dr. L. L. McArthur; Secretary, Dr. Edward B. Weston. Surgeon-General John B. Hamilton, of Washington, was elected an honorary member, and Drs. J. C. Hoag and H. J. Tillotson active members.

TENTH INTERNATIONAL MEDICAL CONGRESS. We are reliably informed that the Tenth International Medical Congress, to be held in Berlin, will commence on the 7th of August, 1889. The preliminary arrangements are in active progress.

WE are advised that Sir James Grant and several other distinguished Canadians, have accepted the invitation to be present at the meeting at Newport.

AMERICAN LARYNGOLOGICAL ASSOCIATION.—At the Eleventh Annual Congress of this Association, held in Washington from May 30 to June 1, the following were elected officers for the ensuing year: President—Dr. J. N. Mackenzie, Baltimore. First Vice-President—Dr. Edgar Holden, Newark. Second Vice-President—Dr. C. E. Bean, St. Paul. Secretary and Treasurer—Dr. C. H. Knight, New York. Librarian—Dr. T. R. French, Brooklyn. Council—Dr. Franklin H. Hooper, Boston; Dr. George M. Lefferts, New York; Dr. Frederick I. Knight, Boston; Dr. D. Bryson Delavan, New York. Representative on the Committee of the Congress of American Physicians and Surgeons—Dr. Harrison Allen, of Philadel-

phia. Dr. Wm. C. Casselberry, of Chicago, and Dr. H. L. Swain, of New Haven, Conn., were elected to membership.

ASSOCIATION NEWS.

American Medical Association. Fortieth Annual Meeting.

The following additional titles of papers to be read at the approaching meeting have been received since the Programme was published in THE JOURNAL of June 1:

Section on Dermatology and Syphilography.

"Clinical Notes on Alopecia Areata," by Lewis Wickham, of the Hôpital St. Louis, Paris, France.

"General Points on the Treatment of Inflammatory Diseases of the Skin," by Oscar Lassar, Berlin, Prussia.

Exhibition of Specimens illustrating Change of Color in the Hair from the Internal Use of Pilocarpine, by D. W. Prentiss, Washington, D. C.

"Two Years' Experience with the Hypodermatic Injection of Insoluble Mercurial Salts in Syphilis," by J. N. Bloom, Louisville, Ky.

"Treatment of Syphilitic Glands by Injection of Iodine, by Fayette Dunlap, Danville, Ky.

"Eruption produced by the Internal Use of Rhubarb," by H. Goldenberg, New York.

"The Influence of Clothing on the Skin," by J. Leslie Foley, Boston.

Section on Surgery and Anatomy.

What Dressing shall lie Next to the Womb?" by R. T. Morris, New York.

"Cranial Surgery," by H. O. Walker, Detroit.

"Unique Case of Fractured Exostosis of Pubis," by Thos. H. Manley, New York.

"Improved Surgical Pump," by Elmer Lee, St. Louis.

"The Surgery of the Spine," by Wm. White, Philadelphia.

"Incomplete Inward Dislocation of the Radius and Ulna at the Elbow," by Albert F. Stifel, Wheeling.

Section on Ophthalmology.

"Insufficiency of the Recti Muscles, with Report of Cases," by J. E. Colburn, Chicago.

In the published programme for this Section the title of Dr. P. D. Keyser's paper appears "Glaucoma Fulminons, after Operations," when it should be "Glaucoma Fulminans after Cataract Operations with Iridectomy."

Section on Dental and Oral Surgery.

"The Origin of Pus," by W. H. Atkinson.

Series of Lantern Exhibits in Embryology, by W. Xavier Sudduth, M.D., DD.S., F.R.M.S., of Philadelphia.

The lantern used will be the new and improved lantern of the McIntosh Battery and Optical Co., and will be operated by Dr. McIntosh, of Chicago.

"Teeth of Pregnant Women," by John Marshall, of Chicago.

PROPOSED RULES FOR SECTIONS.

The following rules are recommended for the government of the Sections:

1. Reading of papers limited to twenty minutes each.

2. Discussion limited to five minutes for each speaker.

3. All who take part in the discussions do so with the *express agreement* that they will write out the substance of their remarks for publication, before leaving the room.

CHANGES IN PROGRAMME.

We have been requested by Dr. H. R. Storer, Chairman of the Committee of Arrangements, to publish the following alterations in General Programme:

First Day. Under Announcements, insert "that Rush Monument Committee meets at Music Hall immediately after adjournment, and that the Sections and Judicial Council meet at 2 P.M., at the Casino," etc.

Alter to "Addresses of Welcome by His Excellency, Hon. Herbert W. Ladd, Governor of Rhode Island," etc.

Second Day. Prayer. R.R. Thos. M. Clark (Episc.), Bishop of Rhode Island.

After Dr. Pepper's Address, insert "Report of Rush Monument Committee."

Third Day. Prayer. Rev. James Coyle (R. C.) of Newport; R.R. Dr. Harkins, Bishop of Providence, being prevented by duties attending the consecration of the Cathedral of the diocese.

Strike out Report of Rush Monument Committee.

Fourth Day. Meeting at *10*, instead of *9*.

"Prayer. Rev. D. A. Jordan (M. E.), Presiding Elder, Providence District, N. E. Southern Conference."

RAILROAD ARRANGEMENTS FROM NEW YORK.

Dr. Liston H. Montgomery, of Chicago, a member of the Committee of Arrangements, informs us that the Old Colony Railroad will sell tickets from New York and all points on their line at a fare and a third (certificate plan) for the round trip, thus enabling those who go from points west of Buffalo, Niagara Falls, Pittsburgh and Wheeling, after they purchase their tickets to New York, to avail themselves of this reduction.

The round trip fare by Fall River Boat Line is $4.50, by rail, Short Line, $7.65.

"THE AMERICAN MEDICAL ASSOCIATION ANNUAL."

We are requested by the Chairman of the Committee of Arrangements, Dr. H. R. Storer, to

state that he peremptorily refused to give any aid or information to the outside party referred to in the "Special Notice" published in the editorial department of THE JOURNAL on June 1.

SOCIETY PROCEEDINGS.

American Laryngological Association.

Eleventh Annual Congress, held in Washington, D. C., May 30, 31, and June 1, 1889.

FIRST DAY.—MORNING SESSION.

The Association was called to order by the President, DR. ETHELBERT CARROLL MORGAN, of Washington, who delivered the

PRESIDENTIAL ADDRESS.

He expressed the profound pleasure which he experienced in welcoming the Association to the National Capital, the home of the scientific libraries, labratories and museums, fostered and encouraged by a liberal government. The Association had wisely followed in the wake of numerous other scientific bodies, which make pilgrimages to our city and exert a healthy influence toward popularizing their special fields of scientific investigation. The noble work of this Association during its eleven years of existence has resulted in placing laryngology upon a substantial basis and in demonstrating its truths and benefits alike to the profession and to suffering humanity. The outlook for laryngology was never brighter than at present.

The tenth volume of the "Transactions" is now in press, and in addition to the papers read at the last meeting of the Association, contains a table of contents of all the papers read to the Association since its organization.

An important amendment to the constitution, increasing the limit of active fellowship, comes up at this meeting. The present limit is fifty, and there are at present no vacancies.

Our library now contains nearly 900 separate titles. The librarian thinks that the collection would be more accessible if in charge of the Surgeon-General's office, and recommends its donation to that library. The Association has lost no members by death since the last meeting.

After some suggestions in regard to the social features of the annual meetings, the president closed by reiterating the assurance of his heartfelt appreciation of the good-will and friendship which had influenced the Association in selecting him as the president of this distinguished body.

DR. E. CARROLL MORGAN, of Washington, D. C., reported a case of

REMOVAL OF A SUPERNUMERARY TONSIL.

The patient, a male, æt. 26 years, vigorous and otherwise healthy, came under observation Sept. 7, 1886, with what he feared was malignant disease of the pharynx. The growth was first discovered four years previous. It had occasioned considerable pain, especially after smoking. During the past two months the growth had rapidly increased in size and the pain had become of a shooting character, extending to the ears, larynx and top of the head. Examination revealed a pendant tumor between the right palatine folds near the uvula and protruding beyond their borders half an inch. The tumor was as large as a small almond. Its color, as well as that of the pillars, was a dusky red. Slight engorgement of the cervical glands appeared to exist. The patient's mother had died of cancer of the breast, and he felt convinced that the growth was malignant. Local and general treatment having no effect, the tumor was excised and the raw surface cauterized with the hot iron. In ten days the wound had healed. The patient was recently examined and there had been no recurrence, now four years after the operation. The specimen removed was examined by Dr. W. M. Gray, microscopist to the Army Medical Museum, who stated that its structure was identical with that of a faucial tonsil which had undergone hypertrophy. The location and microscopic characters of this tumor, as well as the history of the patient prior and subsequent to the operation, proves that this was a hypertrophied accessory or supernumerary tonsil, an exceedingly rare anomaly. A search of the literature had revealed only two other cases of a similar character, reported by Jurasz in 1885. In the first case the tumor was as large as a hen's egg, and was found to spring from the lower anterior portion of the right posterior pillar, by a small and short pedicle. It was removed and found, on microscopical examination, to present the structure of a hypertrophied tonsil. In the second case the tumor was of the size of a hazelnut, and attached below the right tubal prominence. The microscope revealed a structure similar to that of the faucial tonsil.

Conclusions.—1. The lymphoid follicles of the soft palate and pharynx are liable to be aggregated, resembling in arrangement the faucial tonsil. 2. The condition is exceedingly rare, since, excepting the so-called "pharyngeal tonsil," the author has found but one case reported. 3. These lymphoid follicles are also liable to hypertrophy. 4. Such hypertrophies probably occur oftener than is generally supposed. 5. The indications for operative interference in this condition are identical with those for the faucial tonsil.

DR. D. BRYSON DELAVAN, of New York, thought that possibly cases of supernumerary tonsil were not so infrequent as was commonly supposed. Pedunculated tumors of the tonsil which, on examination, show a fibroid structure, are not rare, and it may be that there are degen-

erated supernumerary tonsils; just as the tonsil may, from long continued inflammation, become the seat of fibroid change.

DR. GEORGE W. MAJOR, of Montreal, read a paper on

THE RELATION BETWEEN FACIAL ERYSIPELAS AND ERYTHEMA ON THE ONE HAND, AND INTRO-NASAL PRESSURE ON THE OTHER.

The following cases were cited to show that facial erysipelas may be produced by nasal conditions, particularly when they are productive of pressure:

Case 1.—A girl aged 12 years came under my observation in March, 1884, for the treatment of nasal catarrh. There was a general hypertrophic condition, with pressure of the middle turbinated body of one side against the septum. On the cheek bone of the same side there was a red patch of erythema, which had existed for five months. Treatment of the nasal condition by scarification, puncture and galvano-cautery was followed by disappearance of the erythematous rash, and it has not returned.

Case 2.—A child 4 years of age was seen in February, 1885, suffering with facial erysipelas, commencing on the bridge of the nose and extending to the cheeks. It had already lasted five days, and was not disposed to yield to treatment. Both nostrils were occluded by swelling. All treatment directed to the relief of the erysipelas was suspended, and attention directed to the relief of the nasal condition. In twenty-four hours the erysipelas had disappeared.

Case 3.—In the winter of 1884, a boy, aged 12 years, the subject of recurring attacks of erysipelas, was seen with an attack involving the nose and cheeks. Nasal injections alone were used, and the erysipelas disappeared in thirty-six hours.

Case 4.—February, 1889, a female, aged 56, presented herself with an erythematous patch on the left cheek. This had lasted four months. There was swelling of the left turbinated bone, which pressed against the septum. Under treatment of the nose the erythema disappeared in the course of a week.

Six other cases were alluded to, in which the same condition was seen.

DR. J. O. ROE, of Rochester, had seen a number of cases of erythematous rash due to the nasal trouble. A case recently seen was that of a girl, 23 years of age. There was a very red erythematous patch on the face associated with blebs. She had been treated by various physicians without benefit. In both nares the middle turbinated bodies pressed firmly against the septum. This was relieved and there was immediately a subsidence of the erythematous trouble. He, however, could not admit that erysipelas is due *per se* to the intra-nasal trouble. He held that erysipelas is an infectious disease due to a distinct germ. The presence of erosions in the nasal cavity would render the patient more liable to become infected.

DR. J. N. MACKENZIE, of Baltimore, said that the relation between erythema of the nose and face and intra-nasal trouble had been recognized centuries ago in the time of Willis and by Sylvius. He himself had seen many cases of this kind, but he had never seen true erysipelas due to this cause. So-called facial erysipelas seems to be comparable to an accentuation of the act of blushing—a sort of chronic blush.

DR. WILLIAM H. DALY, of Pittsburgh, was not a believer in the theory of intra-nasal pressure. The evils referred to pressure are really due to intra-nasal turgescence. The condition of erythema is nothing more than a condition of hypernutrition due to a permanently dilated and enlarged blood supply. He believed that the term chronic facial erysipelas is a misnomer.

DR. F. I. KNIGHT, of Boston, remarked that in these cases of erythema of the nose and face he always looked for nævus and very often found it. Where the trouble has been relieved, the affection of the skin has disappeared.

DR. D. BRYSON DELAVAN, had seen several of these cases, and in three or four the erysipelatous attacks have been severe. One case, a girl of 17 years, had recurrent attacks of severe erysipelatous swelling from the alæ of the nose extending over the cheek. These recurred at intervals of two or three weeks. There was marked turgescence of the nasal mucous membrane. This was treated topically, and with the subsidence of the catarrhal trouble the attacks of erysipelas disappeared.

DR. SAMUEL W. LANGMAID, of Boston, then reported

A CASE OF ACUTE MULTIPLE ADENITIS (SEPTIC?) ŒDEMA OF THE LARYNX WITH SPONTANEOUS CURE.

He was called to see a lady, æt. 40, who had been sick for seven days, under the care of an irregular practitioner. The patient was found restless, with an anxious expression, breathing with difficulty, and with a dry, croupy cough. There was no lividity of the face, but it was stated that during the preceding twenty-four hours there had been danger of strangulation. The submaxillary glands, as well as those in the region of the neck, were much swollen. Temperature 99°; voice fairly loud and clear; no enlargement of the tonsils; nothing unusual in the naso-pharynx. With the laryngoscope a tumor, apparently as large as a filbert, was seen occupying the posterior arytenoid space. The anterior third of the vocal cord could be seen approximated and scarcely moving during respiration. He learned that the throat had not been examined until four days after the commencement of the attack. As

the patient was breathing fairly well it was decided to do nothing. If necessary, the tumor in the larynx was to be incised. A few hours later something was felt to break in the throat, and a free mucoid discharge took place. Three hours later, nothing could be seen but the erect epiglottis, with muco-purulent matter welling up. There was a continued discharge, but the relief to breathing was not complete. There had been, also, the discharge of half an ounce of pus. The discharge continued for several days, and the patient gradually recovered.

It was thought that the case was in all probability due to diphtheria, the evidences of which had passed away when the author examined the throat. The patient stated that at the commencement of the illness, the throat had been sore, and that on one side she had noticed red spots on which there had been a white covering.

Dr. Wm. C. Glasgow, of St. Louis, read a paper on

AN ŒDEMATOUS FORM OF DISEASE OF THE UPPER AIR-PASSAGES.

He described an œdematous form of disease which had been epidemic around St. Louis for some two years. During the existence of this affection there has been a disturbance of the ordinary catarrhal troubles. In all cases of this disease there is found a pale, œdematous condition of the fauces. This is a solid œdema. A peculiar glistening appearance is at times very marked. In the majority of cases the soft palate is the seat of œdema. At times the nasal mucous membrane is fouud in the same condition. The epiglottis and different portions of the larynx may be involved. In some cases the true cords are markedly œdematous. A swollen condition of the veins, particularly the palatine veins, is present. This sometimes causes purpura-looking spots, and the mucous membrane appears mottled. In two cases these purpura-looking spots had been seen in the trachea. In one case enlarged veins were seen on the true cord. In some cases ulceration occurs. In some cases, in addition to œdema, there were patches of exudation in different parts of the throat. These when removed leave a bleeding surface. The symptoms of the disease and the appearance of the throat preclude the diagnosis of diphtheria. In six cases spots of mycosis were seen. Glandular enlargement of the neck is quite frequent. In two cases suppuration occurred.

The symptoms are constitutional and local. The affection occurs suddenly in persons of previous good health. There is langour, weakness, and general pains throughout the body. Headache is present, usually frontal, sometimes occipital. In many cases it is simply a dull heavy feeling, in others it is an intense violent throbbing pain. Pain in the back in the region of the sacrum is a characteristic symptom. Fever is present in varying degree. In the exudative cases, the disease commences with chill followed by fever, and the temperature may reach 105°. This soon passes off, and we have a subfebrile condition remaining, probably with a temperature of 101°. This continues a short time, and then there is a return to the normal temperature. When there is simple œdema, the temperature scarcely ever rises above 101° to 102°. This remains for only twelve hours, and during the remainder of the attack the temperature is normal. The pulse is always rapid, soft, and compressible; there has been no exception to this noted. The pulse ranges between 90 and 110 per minute. Profuse sweating is often present, especially during the night. It may be localized.

Afternoon Session.

Dr. John N. Mackenzie read a paper on

SOME POINTS IN THE PATHOLOGY AND TREATMENT OF DISEASES OF THE NASAL PHARYNX.

The following conclusions were presented :

1. The nasal pharnyx is in quite a large proportion of individuals exceedingly sensitive to reflex-producing stimulation.

2. The areas chiefly involved are the posterior portions of the turbinated erectile tissue, and various points along the upper and posterior portions of the nasal pharynx.

3. In consequence of this extreme sensitiveness, a local pathological process which in many persons would give rise to no reflex neuro-vascular changes may awaken a host of neurotic phenomena referable not only to the region primarily involved, but also to others and even remote organs of the body. These may include cough, asthma, and various neuralgic affections ; or the local structural lesion may be the starting-point of various sympathetic affections of the respiratory tract.

4. That these classes of naso-pharyngeal neuroses are explicable on the same general principles laid down in the article on neuroses of the nose, and the pathology of the nasal and post-nasal affections is, therefore, one and the same.

5. That the treatment should be carried out according to the general directions laid down in the article just mentioned.

6. That when morbid processes originate in the pharyngeal tonsil, attention should not be directed to the bursa alone, but an endeavor should be made to extirpate the tonsil as far as possible in its entirety.

7. That while a favorable prognosis cannot be safely predicted by the treatment of the bursa alone, extirpation of the pharyngeal tonsil often affords a most favorable prospect in long-standing cases of post-nasal trouble.

Dr. D. Bryson Delavan then presented some

OBSERVATIONS UPON THE CONDITION KNOWN AS ADENOID HYPERTROPHY AT THE VAULT OF THE PHARYNX, AND THE METHODS USED FOR ITS REMOVAL.

A case was described in which with each acute attack of catarrhal trouble there would be enlargement of the adenoid tissue of the vault of the pharynx, forming a large tumor. When the attack passed away the hypertrophy disappeared. The author then referred to the methods of operation and the accidents which might occur. As the operation was attended with considerable pain he suggested the employment of anæsthesia. He had in a number of cases employed chloroform with satisfactory results, the object being to avoid the profuse mucoid secretion which is apt to follow the use of ether. Where chloroform is used the operation is performed with the patient on his back.

DR. F. H. HOOPER, of Boston, reported a case of a young lady who came to him with acute coryza and in whom he found a large-sized adenoid of the vault. After the attack subsided, the adenoid almost entirely disappeared. In order to avoid error, the post-nasal probe should always be used. With it conditions not apparent to the eye may be recognized. He had never seen serious hemorrhage follow operations for the removal of the tissue. In operating he first removes all that is possible with the post-nasal forceps and completes the removal with the finger-nail. He had never used chloroform. The amount of secretion after the use of chloroform varies very much in different cases.

DR. HARRISON ALLEN, of Philadelphia, advocated the use of the finger as a means of detecting these post-nasal affections. To examine the case thoroughly requires the use of an anæsthetic. In the treatment of adenoid hypertrophy, it is better to remove all the diseased tissue at one sitting under ether than to remove it in portions at different times.

DR. J. C. MULHALL held that for practical purposes the pathology of the pharyngeal tonsil was exactly the same as that of the faucial tonsil. In operating, he had applied cocaine thoroughly to the pharyngeal wall and soft palate to avoid the disagreeable sensation caused by the scraping of the forceps against the healthy pharyngeal wall, and had succeeded very well.

DR. F. I. KNIGHT related a case of acute hypertrophy of the faucial tonsil in which the surgeon performed tracheotomy preparatory to removing the tumor. When he came to operate he found that the growth had disappeared.

DR. WILLIAM E. CASSELBERRY, of Chicago, referred to the importance of thoroughly eradicating these growths. In two cases in which portions of the mass had been left, the reflex symptoms, while greatly lessened, continued to recur. In two cases he had attempted to use the mirror during operation. To do this he pulled the soft palate forward by two rubber bands, passing through each nostril. In one case he succeeded to a certain extent, but in the other failed. This procedure, however, greatly facilitated the operation. In order to prevent the passage of blood into the larynx he was in the habit of bending the head forward at intervals in order to allow the escape of the blood.

DR. J. N. MACKENZIE, as a rule, operates without anæsthesia, removing a portion of the mass every day, or every other day, continuing the operation for a week or ten days. He had seen very little pain from the operation. There is one point in regard to the nature of this so-called adenoid. He had examined a number of these growths under the microscope and they do not differ from papillomatous growths. There is also in addition a true adenoid growth; this is more difficult of removal than the former.

DR. F. H. HOOPER read a paper on

EXPERIMENTAL METHODS OF STUDYING THE ACTIONS OF THE INTRINSIC MUSCLES OF THE LARYNX.

He exhibited the apparatus which he had employed in studying the effect of stimulation upon the internal thyro-arytenoid, the lateral crico-arytenoid, and posterior crico-arytenoid muscles. The larynx of a dog is quickly excised, the mucous membrane removed, and the muscles subjected to electrical stimulation.

The local symptoms vary with the part of the throat invaded. Sometimes they are prominent, sometimes they are wanting. Hæmorrhages are common, are usually slight, but recur frequently.

This is a constitutional disease, due, the author believes, to some change in the blood; exactly what, he was unprepared to say, but probably due to microörganisms. He thought that the disease described was nothing more than influenza, the same influenza which has been described so often, particularly by Graves. The disease has not been limited to the Mississippi Valley, for the speaker had seen cases of it from all parts of the country.

The treatment is very simple. The system must be saturated with benzoate of sodium. Under this remedy the affection subsides in a few days or hours. If left to itself it may continue for weeks or even months.

DR. W. H. DALY, of Pittsburgh, had seen a number of cases similar to those described. He did not consider the condition as one of œdema, but rather as a subacute inflammatory condition of the mucous membrane. There was a sufficient number of these cases which had thin and superficial diphtheritic patches in various parts of the fauces to warrant him in considering the disease of a diphtheroid character. This view was confirmed by the subsequent occurrence of glandular enlargement in nearly all the cases.

DR. J. C. MULHALL, of St. Louis, confirmed the statements of Dr. Glasgow from his own experience with the disease in St. Louis, and reported a case in which the affection had recurred three times.

DR. S. H. CHAPMAN, of New Haven, had seen cases similar to those reported, but agreed with Dr. Daly that they are rather of a diphtheritic character. In one case the disease attacked a child of 17 months. In the same family was a boy 9 years of age with well-marked diphtheria. The first thing noted in the case of the child was a dense swelling of the submaxillary gland. There was great prostration and some fever, 100°–102°. The swelling increased until it extended from the jaw to the clavicle. There was hoarseness and difficulty of breathing, which daily increased. By the seventh day it had increased so much that deep incisions were made into the gland, but no pus was found. A tube was then inserted into the larynx and allowed to remain four days. The child during this time was kept alive by rectal alimentation. At the end of *thirteen* days the swelling began to diminish. The knife was again used and a quantity of pus discharged. The child recovered.

DR. C. E. SAJOUS, of Philadelphia, referred to a case of this disease which occurred in a young man living on a farm in New Jersey, twenty miles from any neighbors, and who had not been exposed to diphtheria. The throat presented small white patches not resembling the yellowish leathery membrane seen in diphtheria. Slight œdema of the soft palate was also present. The temperature was high throughout the entire course of the disease. There was incessant pain in the back and in one limb. After trying a number of remedies, he was placed upon benzoate of sodium.

DR. W. C. GLASGOW, of St. Louis, remarked that he had at first regarded these cases as diphtheritic. In these cases the membrane is adherent; it can be torn away, but a bleeding spot is left. Applications made it worse. If left to itself, it gradually grows thinner and thinner until it resembles a white pearly patch. Diphtheritic membrane does not pursue such a course. The glandular enlargements always occur, even when there is no exudation. He did not think that any one would assert that this œdema was diphtheria.

DR. W. H. DALY, of Pittsburgh, made some remarks on

THE INTIMATE RELATIONS OF CHRONIC DISEASES OF THE UPPER AIR TRACT AND NEURASTHENIA.

His experience had led him to believe that there was an intimate relation between conditions of the intra-nasal cavities and neurasthenia in some of its forms. This view was based upon the study of twenty-five cases. In these cases removal of the nasal trouble was followed by relief of the neurasthenic condition, no special treatment being directed to the general condition.

DR. J. O. ROE, of Rochester, said that most of the members had seen many such cases, and they illustrate the effect that a constant local irritation will have upon the system. A constant nagging of a local irritant will sooner or later produce a depressed condition of the system.

DR. F. W. HINKEL, of Buffalo, remarked that before we could admit that neurasthenic conditions could be the result of any nasal lesion as the sole cause, a careful analysis of all the constituent conditions would be required.

DR. S. W. LANGMAID, of Boston, thought that often the nasal trouble was the result of the neurasthenia. It often happens that operative interference fails to relieve the nasal condition because the neurasthenia is not cured.

DR. C. E. SAJOUS, of Philadelphia, was inclined to support rather vigorously the view of Dr. Daly. In a number of cases he had observed that there were fluctuations in the nervous condition according as the local disease improved or became worse. In one case of neurasthenia associated with deviated septum, correction of the displacement was followed by improvement in the nervous condition. The operation, however, failed to be permanent, and with a return of the deviation the neurasthenic condition recurred, to again disappear with a more thorough operation upon the septum.

DR. F. I. KNIGHT then read a paper on

DYSPHONIA SPASTICA.

He briefly reported the four cases of this affection which he had seen in the last seven years. He regarded the condition as rare; there is probably a spasmodic action of the muscles of phonation, or respiration, or both, giving rise to a high-pitched, jerking voice. The prognosis is unfavorable. The object of the paper was to elicit reports of other cases.

DR. G. W. MAJOR had seen one case of aphonia spastica and two cases of dysphonia spastica. In none of the cases was benefit obtained by treatment.

DR. S. W. LANGMAID had reported one case in which treatment was unsuccessful. The patient, when he had to use his voice, prescribed for himself a little whiskey, and this answered temporarily. There seems to be no change in the voice since the affection first came on, fifteen years ago.

DR. DELAVAN said that in one case coming under his observation the patient was able to talk tolerably well after fortifying himself with a stimulant. This patient seemed to improve under local treatment to the larynx and vocal training, but the treatment could not be continued.

DR. C. E. BEAN, of St. Paul, had seen one case two years ago. Various methods of treatment had been employed without benefit. The voice is now the same as at the commencement.

DR. RUFUS P. LINCOLN, of New York, read a paper on

RECURRENT LARYNGEAL GROWTH.

The patient had come under the care of the late Dr. Elsberg, twenty-four years ago. Dr. Elsberg first operated by the intro-laryngeal method, but could not remove the growth. Twenty-two years ago he did laryngotomy and removed the growth. The microscopical examination made at that time was unsatisfactory. There was no further trouble until a short time ago when the growth recurred. Dr. Lincoln recently removed the tumor, which on microscopical examination proved to be a papilloma.

(To be concluded.)

Connecticut State Medical Society.

Ninety-eighth Annual Meeting held in Hartford, Conn., May 22 and 23, 1889.

FIRST DAY.

DR. GEO. L. PORTER, the President of the Society, in delivering his Address, made remarks on the present standing of the Society, and agreed with the President of last year, that radical changes should be made in the manner meetings are now held, alternately at New Haven and Hartford.

DR. W. W. KNIGHT, the Treasurer, reported that there was a balance in the treasury of $277.24.

The election of officers resulted as follows: President, Dr. O. Brown, of Washington; Vice-President, Dr. Melancthon Storrs, of Hartford; Treasurer, Dr. W. W. Knight, of Hartford; Secretary, N. E. Wordin, of Bridgeport; Committee on Matters of Professional Interest, Dr. Henry Fleischner, Dr. C. H. Beach, Dr. F. D. Edgerton; Delegates to the Pharmaceutical Association, of 1890, Dr. C. A. Lindsley, Dr. F. J. Young, Dr. O. J. D. Hughes; Delegates to American Medical Association, Drs. F. H. Wiggins, M. Storrs, M. A. Cremin, R. S. Goodwin, W. Cummings, J. Olmstead, C. N. Alling, E. T. Bradstreet, F. L. Smith and Wm. Winter. Delegates were also appointed to attend the State meetings of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New York and New Jersey.

Dr. E. M. Moore, of New York State, was elected an honorary member, and the name of Prof. Wm. H. Welch, of the Johns Hopkins University, was proposed. This, in accordance with a by-law, went over for one year. After transacting other business of minor importance the meeting adjourned.

In the evening the members were received at the residence of Dr. Wainwright.

SECOND DAY.

The meeting was called to order at 9 A.M. The Secretary, Dr. N. E. Worden, reported that there had been 32 new members admitted during the year, and that present membership is 508.

DR. L. B. ALMY, Chairman of the Committee on Matters of Professional Interest, gave the results of papers sent to the doctors in different parts of the State, asking what had been their experiences with antipyrin, antifebrin, phenacetin, sulphonal and saccharin. The drugs had been pretty thoroughly used and generally the results were satisfactory.

DR. P. H. INGALLS of Hartford, read a paper on

UTERINE CANCER.

The author thought no faith was to be put in the hereditary theory. He said that the theory of local origin was fast gaining ground and he would not be surprised if in the future a germ would be isolated as the cause of cancer. The generally accepted causes are age, child-birth and injuries. Thomas says he never knew a woman to have uterine cancer who was never pregnant. Early diagnosis was very important, and if there was any suspicion of cancer the microscope should be used to decide. Surgical interference was the only treatment, except opium for pain and a solution of permanganate potassium for the bad-smelling discharges. Good hygienic surroundings were of course necessary. Operation should be early and thorough. If the disease had extended beyond the uterine tissue it was too late to operate, as it only increased the inflammation. He spoke of the different operations, but preferred vaginal hysterectomy.

DR. J. G. HOLMES, of New Britain, read a paper on

SCARLET FEVER.

This paper was a general review of the disease with the treatment and hygiene.

DR. SETH HILLS read a paper entitled

PHTHISIS PULMONALIS.

The theory of contagion in this disease was spoken of, and the author claimed no one had consumption without taking it from some outside source. The typhoid-fever germ was hunted to its death, while the germ of consumption, that most widespread of all germ diseases, is allowed "to go scot free." The medical profession should take some decisive action. He thought the time was not far distant when the patient with tuberculosis would be isolated from the healthy.

THE PRESIDENT in his address gave greeting to those present and reminded them that they were responsible for the future of the Society. The meeting in Paris for the consideration of phthisis, he thought, was the most important medical event of the past year. At that meeting

it was shown that it was the opinion of most present that consumption was probably contagious. Health was a factor of political economy. Anything to prevent sickness or to alleviate it was an act of statesmanship. The State ought to enact laws to govern the sick and the healthy, so that disease would be reduced to its minimum. The prosperity of the country depends upon the common people, and our country is more dependent upon the health and character of its people than any other. Public health is public wealth. When a laborer is taken sick he becomes a burden to the community. He quoted statistics to prove that the loss to the country by sickness is about $392,000,000 yearly, and when a pestilence sweeps the country the amount is vastly larger. Boards of Health are now appointed to prevent the spread of disease, and the amount of good they do can be seen by the results that have been obtained in so greatly reducing the number of cases of small-pox. The question of the future is how to prevent disease. This could not be solved by the busy practitioner in the sick-room, but must be done in the laboratory.

DR. G. H. JENKINS read a paper on the *Pollution of Sources of the Supply of Water and Ice.*

Chronic Pachymeningitis Interna was the title of a paper by Dr. J. F. Calef, and a paper on *Fractures* was read by Dr. C. B. Newton.

Philadelphia County Medical Society.

Stated Meeting, April 10, 1889.

THE PRESIDENT, W. W. KEEN, M.D., IN THE CHAIR.

(*Concluded from page 824.*)

SPECIMENS EXHIBITED.

DR. J. PRICE: Mr. President, I have here a small group of ovarian cysts of mixed character, removed early. The patients were all sufferers. One had been under rest treatment for fourteen months. This one was removed by Dr. Müller, of Germantown. It is a typical example of a parovarian cyst with a large, healthy ovary and slight adhesions. There was a small cystoma of the other ovary. Most of these small cysts occurred in young women. This small dermoid I removed from a patient aged 19. The operation was done four months ago, and she is now pregnant at the second month.

This was a fibroid in the left broad ligament, which had evidently gravitated into this position, and was removed per vaginam.

I have here three specimens of typical extra-uterine pregnancy. This large one was almost of the size of a child's hand. This was a case of Dr. Bernardy's, in which he made a positive diagnosis. The placenta and membranes are inside. On the other side there was a hydrosalpinx. This demonstrates the theory of Mr. Tait in regard to the causation of tubal pregnancy, *i.e.*, desquamative salpingitis. In the second place the placenta is in position. All of those specimens have been examined under the microscope, and there is no question as to the diagnosis.

I do not wish to give complete histories of the patients from whom these specimens were removed. In many cases they are very similar. Most of them had been subjected to a great variety of treatment and torture, and had not been benefited. Some made narrow escapes from death. Some were pus tubes, unilateral, or bilateral, some recent, some long standing. In some of the latter it was difficult to say which was the tube and which was the ovary. In a few cases there was abscess of one or both ovaries. In a few cases there existed a small broad ligament cyst. Many of these tubes were enlarged, some being as large as the fundus of the uterus.

I have here a fresh tube removed by Dr. Hoffman. Here is a group of abscesses of the ovaries co-existing with pus tubes. In many of these there were several distinct abscess cavities. If tapping had been resorted to in these cases it would have been necessary to have tapped several cavities.

In this group I have six cases that refused operation from one to five years ago. We are often asked what becomes of the patients who refuse operations. Some die in the hospitals. These cases drifted around among other doctors, and finally returned for operation. Two cases in which I had urged operation, one four months ago, the other six months ago, came to me at midnight, stating that the temperature was 104° and the pulse 140, and requesting an immediate operation. In both I refused to operate until the following day, and both recovered from the operation.

We are often told that the fluid portion of the pus may be absorbed and the patient recover. This may be true in some few cases, but the matter still remains as a source of mischief. These pus tubes are not rarely the cause of psoas abscess. In one case, which I sent to the Pennsylvania Hospital, the psoas abscess was due primarily to pus tube and abscess of the left ovary—demonstrated post-mortem.

This is a very large dermoid. I had picked this case out for operation, five years ago, at that time there was a small tumor behind the uterus. After I saw her five years ago she conceived and bore a child, and suffered some post-puerperal trouble. The existence of a small tumor is unquestionably a common cause of post-puerperal trouble.

The patient from whom this tube was removed was very ill when I was asked to see her by Dr.

Hoffmann, two weeks before the operation. I found her leaking copiously with a rapid thready pulse, and thought that she would die on the table if an operation were attempted. Under treatment her condition was somewhat improved, and the operation performed. I shall open this tube before you. It contains a fluid that looks like pus. This tube contains several sacs. This is an interesting point in connection with the Martin method of dealing with pus tubes by tapping. A single tapping would not reach all of the sacs.

DR. JOSEPH HOFFMAN: I have a word to say in regard to diagnosis in connection with my own specimen. I first saw the patient six weeks ago. She had been under the observation of a gentleman who thought she was pregnant. I found trouble on the right side, but did not discover that on the left side as I did not look for it. I considered the mass on the right side either a complication of the bowel, a pus-tube, or extra-uterine pregnancy. It turned out to be a pus-tube. In the course of a few days the patient developed symptoms of typhoid fever. Previous to this there had been no symptoms of fever and no other symptoms, with the exception of pain in the pelvis. She was suddenly seized with nose-bleed, high fever, and for several days the temperature followed the ordinary course of that of typhoid fever. It was this that placed her in the condition in which Dr. Price found her. The strange point is, that up to this time the woman had never had fever, nor any of the ordinary signs of pus. Nor had there been symptoms of peritonitis. The woman was in a very bad condition at the time of the operation. After the operation the temperature was below normal and she was covered with a cold sweat. She was only kept up by the careful application of heat. During the six days following the operation the highest temperature was 102.4. To-day, the tenth day, it is 98.8. There was universal peritonitis. The omentum was adherent, and no attempt was made to loosen it. This case shows that the statement that the peritonitis from such a cause is local, and not general, is nonsense. The only symptom that I dislike is a small discharge of pus from the drainage tube.

DR. M. PRICE: Large ligatures are useless. The smaller the ligature that will do the work the better. The ligature shown by Dr. Penrose is too large. In my case of removal of the kidney I applied two ligatures, one large and the other small. The large one worked through the back three months after the operation, and there was absolutely no change in it. I believe that in intra-peritoneal operations large ligatures are dangerous.

DR. C. B. PENROSE: The first specimen is a very unusual specimen of a fibroid uterus which has undergone cystic degeneration. I removed it this morning by abdominal section. There was in the upper part of the tumor a cyst containing three quarts of fluid. This was tapped before the tumor was extracted. In all, five quarts of fluid were contained in the tumor, and the sense of fluctuation was as great as in an ovarian cyst. The cavity of the uterus would hold a quart of fluid, and is separated from the cysts throughout the tumor only by a membrane as thin as peritoneum.

The next specimen is an unusually large hydrosalpinx removed from a woman twenty-five years of age. It contained ten ounces of straw-colored fluid. The cyst wall was thin and transparent.

The third specimen is a hæmato-salpinx removed from a woman aged fifty-three years, with fibroid of the uterus of the size of a child's head. This case illustrates the fact that in many cases of uterine fibroid there exists disease of the tubes and ovaries. This has an important bearing upon the method of treatment employed in these cases. The removal of the ovaries not only stops bleeding and causes shrinkage, but it also takes away diseased and dangerous structures; a result not possible to obtain by means of drugs or electricity.

I have here a ligature removed from a woman who had suffered for twelve months from a sinus and fæcal fistula which had followed operation for pyosalpinx, in one of the hospitals of this city. The sinus involved a drainage tube tract. When I operated much of the small intestine was found adherent in the pelvis and at the bottom of the fistulous tract, lying on the sigmoid was this ligature, in immediate contact with the opening into the bowel. This was undoubtedly the cause of the sinus and the fecal fistula. The ligature is unnecessarily thick, and the knots would be likely to render it irritating. The wall of the fistulous tract, as you can see, was formed of well-organized lymph.

The case shows the danger of permitting a drainage tube sinus to run too long without surgical interference. In this case there was, for the first few months, only a purulent discharge, but the walls of the bowel finally became destroyed, and a fecal fistula resulted.

Allegheny County Medical Society.

Special Meeting, March 19, 1889.

WM. F. KNOX, M. D., PRESIDENT, IN THE CHAIR.

DR. DUFF: Two months ago I reported a case of rheumatism, or rather a case of rheumatism associated with eruptions around the joints; at the time I did not understand the case, and could not say what the outcome would be. The rash

was first papillary, then vesicular, following up in the order of the joints attacked. A few days after, I found several large blebs over the shoulder, just such as we have arise after the application of cantharides plaster. As they dried up, the submaxillary glands and cervical glands began to enlarge and continued until suppuration occurred, and discharged large amounts of pus. After suppuration occurred, the young lady improved rapidly. I am still at a loss to account for the condition, and promised that I would give the result of the case.

DR. PAINTER reported a case of

CONGENITAL MALFORMATION OF THE SOFT PALATE.

Mrs. F., æt. 40, a widow eight years, consulted me on account of hoarseness following a cold. Inspecting the pharynx, I found an unique anatomical relation existing between the upper part of the pharynx and the soft palate, of which the patient was ignorant. The free border of the soft palate and the palato-pharyngeus muscle on either side are carried backward and attached to the posterior wall of the pharynx, forming a diaphragm between the superior and middle divisions of the pharynx. In this dividing membrane there are two somewhat circular openings—one one-half inch, and the other one-eighth inch in diameter. These openings are in the median line. The uvula cannot be distinguished. The patient can give no reason for this marked departure from the normal construction, and was ignorant of any irregularity till I asked her to permit a demonstration of her throat to this Society. She supports a family of five by washing. She frequently has a cold in the head, but experiences no difficulty in clearing the nose. She has never had noises in the ears and hears well. The sense of smell and taste are unimpaired, and her voice, save an occasional hoarseness, has never changed. The voice might be described as muffled. Her sleep is undisturbed. At least two of her children have throats normal in construction. She has had typhoid fever, and believes she had diphtheria when a child. As I demonstrate the case, it will be observed that she is well developed generally and in good health. In the absence of any ulcerative process, I conclude the case to be one of congenital malformation. The case has two interesting points, viz: First, this malformation is uncommon; and, secondly, the absence of symptoms such as one would think should follow such abnormality.

DR. HUSELTON reported a case of

COMPOUND PUNCTURED FRACTURE OF THE SKULL,

produced by the calk of a horse's shoe. John T., æt 38, a farmer, was brought into the Allegheny General Hospital on the evening of January 26th with a history of "fractured skull." He was conscious, talked rationally, pupils equal, no paralysis, and a full, slow pulse. The history, as given by himself, is as follows: He was riding in a "buckboard," leading a spirited horse by means of an ordinary halter. The horse, becoming frightened at a passing railway train, jumped upon the "buckboard," knocking the patient to the ground. He tried to rise, still holding the strap, when the horse reared and came down, his hoof striking the patient on the head, rendering him unconscious. He did not regain consciousness for about one hour after the injury, when he walked into the hospital supported by a friend.

An examination revealed a depressed, punctured fracture of the skull, situated in the frontal bone, two inches above the right eye. The fracture was shaped like, and about the size of a large almond, and very much depressed. A sero-sanguinolent fluid, supposed to be subarachnoid, escaped from the wound, but we were unable to find an opening in the dura mater. This fluid flowed freely as long as the head was resting on the occiput, but on turning it to either side it ceased. I trephined, removing the button from the lower portion of the wound. A number of fragments, principally from the inner table, were removed and the depressed bone elevated into position. There was no hemorrhage from the interior. The wound was flushed with a solution of bichloride mercury (1:4000). A few strands of silk were placed in the opening and brought out at the lower portion of the wound for drainage. The edges were brought together by silk sutures, and the operation completed by an antiseptic dressing. On the morning of the 27th his temperature was 100.4°, but gradually and continually dropped to 98.4° on the 29th, and remained normal from this time on. The dressings were removed on the 30th, four days after the operation. The wound had closed by primary union, and without a drop of pus or discharge of any character. The stitches and silk for drainage were removed on this occasion, and the head was redressed, observing the same antiseptic precautions as at first. These dressings were removed on February 4th; and as every part of the original injury was healed, an ordinary nightcap bandage was applied and the patient was permitted to get up on the next day, February 5th.

The case progressed without an untoward symptom of any kind. The patient was anxious to go home on the tenth day after the operation, but was kept in the hospital as a precautionary measure until February 15, when he was discharged cured, and the opening in the skull was apparently being rapidly closed by a bony deposit. His treatment was practically nil. The diet was liquid for the first few days. A mercurial at the outset was all he had in the way of medication.

DR. BUCHANAN: I would like to say a few

words on the subject of trephining. I think that Dr. Huselton had very distinct indications for his operation, and it certainly was very successful. I think there are one or two points on the subject of trephining that may be dwelt upon. The principal one is that the indications for trephining have entirely changed in the last few years. Formerly, there was a very great difference made between simple and compound fractures. Compound fractures were recommended to be trephined that would not have been considered proper subjects for trephining had they been simple. The presence of a simple depressed fracture, if the depression is slight, it is impossible to make out. A case of depressed fracture occurred in my practice a week ago, in which it would have been impossible for any one to make out the depression by external examination. On the following evening, when symptoms of compression came on, I opened the scalp and found the depression, removed a button of bone, elevated it, removed a clot of blood from beneath the bone, and put on a dressing. The patient afterward had no elevation of temperature, commenced to improve immediately, and is now practically well. The second point that I would call attention to is that the secondary results of depressed fractures are very much better appreciated now than heretofore. The deficiencies in intellect and epilepsies justify more frequent resort to the trephine and elevator in simple fractures of the skull. A case may recover and pass outside of the surgeon's sight, but still be a bad result; six months, a year, or several years after, there may be a chronic inflammation of the membranes of the brain or some damage done to the brain by plastic effusion, which will result in epilepsy or other troubles. I would therefore think that Dr. Huselton, even if there had been no compound nature in this fracture, would have been perfectly justified in elevating it, and I would go even so far as to say that when a fracture of the skull is suspected, if there is even a suspicion of depression, an exploratory operation through the scalp should be undertaken, because if there is no depression, such an operation would not hurt the patient a particle, and if there is a depression, it is exceedingly important to know it and act accordingly.

DR. MUNN: In connection with Dr. Buchanan's remarks on trephining depressed fractures, I will take the opportunity to relate a case which I met in my practice a year ago in April. A man was thrown out of a wagon by a runaway horse, and on being picked up a depressed fracture was discovered on the upper posterior corner of the right parietal bone. He was taken to his home, and there the propriety of an operation was spoken of, but it was declined by the friends of the patient. He passed out of my hands, went under the care of a homeopathic physician, and eventually recovered after remaining unconscious for seven days; he had hemorrhage from the nose and the ear. Now, after the lapse of eleven months, he presents a decidedly marked depression in the region of the injury, has double vision, slight paralysis of the right arm, slight paralysis of the right leg, has some aphasia, and a slight paralysis of the left side of the trunk. I think the case to-day presents every indication for operation, but the operation was not performed at the time it should have been. Since the injury, he has had two epileptic seizures, nothing of the kind ever having occurred to him before.

DR. HUSELTON: I endorse everything that has been said by Dr. Buchanan and Dr. Munn. I would also add, I think we are too apt to overlook the importance of a fracture of the skull; under modern antiseptic treatment, I think trephining a comparatively safe operation, and in every case I think that where there is reason to suspect a depressed fracture of the skull, the trephine is a proper precautionary measure to be resorted to.

DR. W. P. MUNN presented a specimen, obtained from a cadaver of unknown history, of

ENTIRE ABSENCE OF THE INNOMINATE ARTERY.

At its place of origin the two common carotids arise together, then the left subclavian is given off, and last arises the right subclavian, which passes toward the right, behind the three other vessels.

DR. BUCHANAN: I have a former patient present whom I wish to exhibit. His case I reported to the Society three or four months since. He is a man whose patella I wired. I have not before been able to present him to the Society; I wished to present him at that time, but as I explained, he got out of my reach. I met him on the street sometime ago, and found that he had a very good result, and I thought I would show him to the Society. He was away from his laboring work just eight weeks.

(Patient exhibited.) You will observe that there is no separation whatever to be discovered between the fragments, and the joint movements are perfect. The limb is, to all appearances, as good as its mate.

DR. MURDOCH: Dr. Buchanan is to be congratulated on the result of this case. So far as can be told by an examination of this man's leg, the union is perfect; there seems to be a bony union between the fragments. I say seems to be, because I do not believe it is so; I very much doubt if bony union ever takes place in a fracture of the patella owing to the fact that many specimens have been thought to be bony, but when examined after death and the bones subjected to a process of boiling, it has been found the union was only fibrous after all. But if it is fibrous, it is just as good as if it were bony and just as useful, because there is no separation of the frag-

ments, and by scarcely any other treatment could the two fragments be brought into such close apposition; but anybody who knows the difficulty of treating fracture of the patella knows how difficult it is to keep them in apposition, and that if they are not kept so, the patient is maimed for life. The only objection to this operation that can be raised is the danger of it, but under antiseptic precautions, where they are thoroughly carried out, it is probable that the danger will be but little; but it is a melancholy fact that, notwithstanding the perfection to which antiseptic dressings and surgery have been brought, this operation, even in the hands of the best surgeons, is frequently disastrous, that is the cutting down on the knee-joint, freshening the edges of the bony surface and wiring them together. When I was in New York a year ago last spring, Dr. Sands told me of two cases that he had known where the patient had suffered amputation and had eventually died, where this operation was attempted; and only about a month ago, Dr. Stimsom, at a meeting of the Academy of Medicine, in New York, stated that, during the past summer he had known three cases where an operation had been done in New York, and the patients had in all three cases suffered amputation afterward, so that even in the hands of the best surgeons, and with the greatest care taken, it is a dangerous operation, and surgeons have been endeavoring to find one that is less dangerous, that will accomplish the desired result; whether they will succeed or not remains to be seen. About three or four weeks ago Dr. Stimson, after making the remarks I have stated, exhibited five cases where he had tied the patella together subcutaneously, and the procedure seemed to me so simple and so likely to be successful that I think it should be tried, and if it succeeds, it will be much simpler than this operation, and, I believe, safer. The operation is so simple, that I will just show it here on the blackboard, if I can. (Drawing made by the doctor on the blackboard, exhibiting the method of operating.) I tried this last Saturday on an old lady, 60 years of age. I am not able to do what Dr. Buchanan has done, bring my patient here, and perhaps I never shall be able to do so. The patient is perfectly comfortable, and so far as anybody can tell, after this short treatment, bids fair to have a good result. I do not bring this up to criticise Dr. Buchanan. I am very glad to have had an opportunity to see Dr. Buchanan's case, the first one, I believe, that has been operated on in our county.

DR. HUSELTON: I want to congratulate Dr. Buchanan on the successful issue of his case. I had the pleasure of being present when he operated, and am glad to say that I think the operation was very carefully and skilfully performed. At the same time, I do not believe the operation will ever become a popular one; I think that opening so large a joint as the knee-joint is too hazardous, and attended with too much danger, particularly when we are having very good results by the old method. I have had several cases, at least three or four in my practice, the last one occurring about two years ago, treated by the old method, and the result every thing that could be desired. I did claim the union was bony; however, I think this is not the case, but if ligamentous or fibrous, it is almost impossible to detect the fact. I exhibited the case to at least one person here, and would be glad to present the case to the Society at some future time for their inspection.

DR. BUCHANAN: I am very glad Dr. Murdoch presented this new method of treatment. I considered that method shortly after I had done this operation. It was then first brought to my notice. It occurred to me that this certainly is a much safer operation than the open method, but it is open to two theoretical objections, whether they are real objections, time alone will tell. The first is that it will probably in a great many cases, if not the majority, be impossible to approximate the fragments exactly by this method. I should think that the anterior borders of the patella, by this method, would be tilted a little backward, and that would keep the surfaces from coming together. In wiring a bone, it is sometimes a difficult matter to get the surfaces exactly apposed, even when you have everything open before you and are able to handle the parts, and of course it is very much more difficult when you are doing it subcutaneously. And the second objection that I would suppose to exist in regard to this method is, that the torn fragments of the capsule of the joint float in between the fragments. I believe it has been proposed to pass a needle in and hook these out from between the fragments. At all events I should imagine from the case of this man, at least, that it would be very difficult to get these shreds from between the broken bones, and it is said by a number of good surgeons (Prof. Macewen was the first, I believe, to state it), that this is a chief cause of non-union, or rather of the failure of bony union in this fracture. In regard to Dr. Huselton's results, I think he is to be congratulated. I don't think that the result which he has mentioned is otherwise than exceptional in these cases by the non-operative methods of treatment.

AMERICAN CLIMATOLOGICAL ASSOCIATION.—The Sixth Annual Meeting of this Association will be held in the Boston Medical Library Association Hall, 17 Boylston Place, Boston, on June 24 and 25, under the presidency of Dr. Vincent Y. Bowditch, of Boston. The programme contains a large number of papers by eminent physicians.

FOREIGN CORRESPONDENCE.

LETTER FROM PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

Dr. Worms on Diabetes—Prof. Ollier on the Advantages of the Resection of the Hip-joint in Cases of Suppurative Coxalgia—Dr. Larat on the Treatment of Intestinal Occlusion by Electricity—Dr. Gaucher, of Algiers, on Abortive Treatment for Whitlow--Some Hints on Prescribing Hydrochlorate of Cocaine.

Dr. Worms lately read a note at the Academy of Medicine in which he communicated the result of his long and patient researches on diabetes in a clinical and therapeutic point of view. According to the author diabetes is very often a malady of slow evolution and of long duration. He thinks that none of the existing theories on the pathogeny of diabetes is satisfactory. Moreover, many of the symptoms, such as polyuria, emaciation, thirst, dental caries, which are looked upon as essential symptoms, are often found wanting. In a clinical point of view, the toxic or accidental glycosurias being put aside, the distinction between chronic glycosuria and diabetes mellitus is not justified. As regards the treatment the principal object of the physician should be to maintain in the highest degree the vital energy and integrity of the digestive functions. This result is obtained by the application of the diet and regimen instituted by Bouchardat. Dr. Worms thinks, however, that the gluten bread may be suppressed, and that the patient be allowed to eat ordinary bread in small quantity. Saccharin, which has been proposed as a substitute for sugar for the use of diabetic subjects, appeared to Dr. Worms to cause disgust after a time and to act injuriously on the digestive functions, which it is of the highest importance to preserve intact. As regards drugs, it is the sulphate of quinine in doses of from 20 to 30 centigrams which gave the best results. He does not consider it as a specific, but as a powerful neurosthenic which fulfils one of the principal indications of treatment. In certain cases he employed arsenic and opium with good results. Antipyrin is of too recent introduction in the therapeutics of diabetes to give a decided opinion as to its merits. As for bromide of potassium, which has also been much vaunted, it gave unfavorable results. Dr. Worms founded his observations on 41 patients whom he had been able to follow for some time and some of them are already cured.

At the same meeting of the Academy, Professor Ollier, of Lyons, read a note on *The Advantages of the Resection of the Hip-joint in Cases of Suppurative Coxalgia*. He stated that since 1860 he practiced this operation about fifty times. It was the sub-periostic method that he had employed. After the operation he endeavored to obtain anchylosis of the joint. He considers that when the femur is anchylosed in a favorable position, with a slight flexion, the operated subjects may go through the hardest work and become indefatigable walkers. Once the anchylosis is established, there is no more fear of secondary displacements, nor the return of tuberculous or inflammatory foci. M. Ollier concluded his note by recommending that in the great majority of the cases of suppurative coxalgia anchylosis should be obtained. However, articular mobility may be preserved when early resection is practiced, that is to say as soon as an abscess around the articulation is suspected or established, because then the extent of the lesions of the soft parts being reduced to the minimum, a very complete reparation may be expected. Nevertheless, M. Ollier does not always approve of this manner of proceeding, as in many cases of suppurative coxalgia in childhood cures may be obtained by more simple operations than resection, such as antiseptic opening of foci, iodoform injections, drainage, etc.

In a very interesting note on *The Treatment of Intestinal Occlusion by Electricity*, Dr. Larat begins by observing how often the diagnosis of the cause of intestinal occlusion is difficult. Nearly always, one is in the presence of a tympanitic intestine, preventing all palpation. He points out also the complete uselessness of purgatives when the intestine is impermeable. In such cases, repeated purgations serve only to excite vomiting. When relief of the bowel is obtained by electrization it presents different forms; sometimes it is sudden, gaseous and stercoral, sometimes it takes place slowly, occupying several days. One sitting alone of electrization is often powerless to obtain it. On an average, four or five sittings are necessary to obtain the desired result. Of nineteen cases reported to the Academy of Medicine, the author cited six successes. In conclusion, he believes himself justified in deducing from these facts that intestinal galvanic electrization deserves to be employed in all cases of occlusion, as soon as the medical means have failed, and when the obstacle is evidently insurmountable by purgatives, on which one should not insist too much.

Dr. Gaucher, of Algiers, recommends the following abortive treatment for whitlow. He says it is sufficient to moisten slightly the painful part and a little around it with some water, and to pass over this surface a stick of nitrate of silver. A few hours after the skin becomes black, all pain disappears, and the inflammation is arrested. The blackened epidermis receives no dressing and in six days the black color disappears. The author was induced to try this remedy in a case of a fit of gout. The patient had his great toe swollen at its base, it was painful to the touch, a little red, and the seat of lancinating pains which hindered the rest of the patient. The painful articulation was moistened and rubbed over with a stick of

the nitrate of silver. The next day the joint had diminished in size and was covered over with a black skin. The pain completely disappeared a quarter of an hour after the painting, and the patient got up to follow his occupations.

The hydrochlorate of cocaine is so much in vogue that a writer in the *Formulaire Mensuel* thought it necessary to remind his readers that when this drug is prescribed associated with energetic bases or their salts, cocaine is precipitated. Thus, in a gargle containing borax or a mixture containing lime water, precipitates are produced not only with cocaine, but also with a large number of vegetable salts. The practitioner will therefore direct to be written on the label, "shake each time." Without this precaution the first doses of the medicament may be inefficacious, and the last, on the contrary, much more active. A. B.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

American Academy of Medicine—Dr. W. Gilman Thompson's Paper on the Therapeutic Value of Oxygen.

At the last meeting of the Academy of Medicine Dr. W. Gilman Thompson read a paper on *The Therapeutic Value of Oxygen*, and in connection with it gave a demonstration of the effects of high pressures of oxygen upon animals. The first question he took up was whether an increased pressure really caused more oxygen to be absorbed by the system. Under any circumstances, he said, the hæmoglobin of the blood could take up but a very limited amount of oxygen, and the same was true of the blood-plasma. He pointed out the incorrectness of the old idea that animals could not live in pure oxygen, the system being burned up, as it were, by the increased tissue changes excited by it, and referred to the experiments of Dr. Andrew H. Smith in 1869 and 1870 in proof of this. His conclusion was that very little additional oxygen could be made to enter the system by any amount of pressure that would not be injurious.

He then exhibited the apparatus which he had constructed for the purpose of exposing animals to high pressures of oxygen. It consisted of a strong iron cylindrical chamber, with glass-covered openings at each end, in which the animal to be experimented upon was placed, and to this chamber oxygen was supplied at any degree of pressure desired from a cylinder containing the gas at a pressure of 225 lbs. to the square inch. Two animals, a monkey and a pigeon, which had been subjected for one hour to a pressure of 30 lbs. to the square inch of oxygen, in addition to the ordinary pressure of the atmosphere, 15 lbs., were taken from the chamber in an apparently perfectly normal condition.

Dr. Thompson next proceeded to report with more or less detail a series of experiments he had made upon healthy animals; these being dogs, cats, pigs, monkeys, guinea-pigs, pigeons and alligators. It was found that all the animals could exist comfortably in the oxygen until a pressure exceeding thin atmospheres was reached. The higher the order of the animal experimented upon the more quickly it became affected. As a rule, a decided fall of temperature, often amounting to from 4° to 6° F., was observed; and only in cold-blooded animals was there any rise of temperature. Similar results had been reported by Valenzuela in a paper read before the Royal Academy of Madrid. This marked decrease he did not believe was to be attributed at all to the effect of the oxygen, but to the profound disturbances caused in the system by the high pressure employed. If, as was claimed by the older writers, a greatly increased tissue metamorphosis was caused by oxygen, this would unquestionably be accompanied by an increase, and not a diminution, of the body temperature. In such of the animals as died or were killed after being subjected to high pressure of oxygen he found pulmonary engorgement and dilatation of the right heart. The convulsions which usually resulted when the pressure was carried to a high point were, as a rule, quickly controlled by blowing off 5 lbs. of pressure. The cause of these convulsions, he said, was as yet undecided, but he was inclined to attribute it to the effect of the unequal diffusion of gases under different degrees of pressure. He also tried the experiment of subjecting animals on alternate days to high pressure of oxygen and to compressed air.

A second series of experiments was made upon animals in which abnormal respiration had been induced. Dyspnœa, he said, might be classified as being due to

1. Abnormal conditions of the air.
2. Abnormal conditions of the blood.
3. Obstructed circulation.
4. Diminished surface for aeration.
5. Neurotic influences.

In a cat in which dyspnœa was produced by cutting both vagi instant relief was afforded by exposing the animal to oxygen; while, on the other hand, the dyspnœa was increased by compressed air. In the second experiment a canula was introduced into the pleura of a dog. In the third pulmonary congestion was caused in a cat by injecting a solution of nitrate of silver into the lung tissue, and the dyspnœa resulting therefrom was greatly relieved by oxygen. In other experiments the lung was compressed by injecting considerable quantities of water into the pleura, and in still others the animals were bled to

the extent of many ounces. The results of these experiments, he said, went to show that oxygen does aid in a moderate degree certain types of dyspnœa.

In considering the therapeutic value of this agent Dr. Thompson stated that it had been employed, first, as curative in certain general diseases, more particularly of the blood and circulation; and, second, as a palliative in dyspnœa due to various causes. Of late its use had increased to such an extent that two or three hundred thousand gallons of the gas were now annually consumed in New York City alone. Among the other troubles, beside dyspnœa, in which it was claimed that it had proved of benefit, were anæmia, chlorosis, croup, chronic gastric catarrh, migraine, cholera, and opium poisoning. In anæmia, chlorosis, etc., he said he could see but little advantage over good fresh air in giving inhalations of diluted oxygen two or three times a day, as was the usual practice in such affections. It did not seem rational to him to expect that sufficient oxygen could enter the system under these circumstances to produce anything but a temporary effect at the best. In cases of blood poisoning, again, he had failed to see any benefit derived from oxygen. In certain subjective cases of dyspnœa it no doubt gave relief, but in a case of poisoning by illuminating gas which he had seen at the Presbyterian Hospital its administration was kept up for nearly three days without producing any effect either on the rate of respiration or on the cyanosis present. In cardiac diseases his experience with it had not been encouraging, and he referred particularly to a case of malignant endocarditis in which it proved of no avail in relieving the dyspnœa. In certain cases of asthma and of uræmic dyspnœa, however, it gave decided relief, and in such he believed it was an invaluable therapeutic agent; though not, of course, curative.

In the discussion on the paper Dr. J. West Roosevelt spoke of the relation of the amount of oxygen inhaled to that absorbed, and said that while the amount which entered the plasma or the hæmoglobin of the blood was comparatively small, he believed it was sufficient to cause appreciable results in many instances. As to the therapeutic value of oxygen, in the neurotic form of dyspnœa we had a condition in which the mere act of inhalation and the engaging of the attention of the patient would often have a beneficial effect. In anæmia he had met with fairly good results with oxygen, though the patients improved less rapidly than under the use of iron. If in any case the hæmoglobin was not saturated an improvement showed that more oxygen was carried than under ordinary circumstances. On the whole, oxygen had proved of considerable value in his experience, and in cases of diminished surface for aeration he had seen cyanosis decidedly improved under its use.

Dr. George L. Peabody was the most skeptical of any of the speakers in regard to the efficacy of oxygen. So many circumstances were involved, he said, in estimating the value of an agent like this, that it was difficult to arrive at positive conclusions respecting it. Thus, when it was not the only therapeutic agent employed it was impossible to say just how much benefit was derived from it; and this difficulty was further increased in diseases which naturally tend to recovery. From all that he could make out from reading and clinical observation there seemed to him good reason to doubt the alleged efficiency of oxygen, and personally he believed that, as a rule, quite as much relief could be obtained from ordinary fresh air. It might be tried, however, in maladies attended with dyspnœa in which the blood is unchanged, such as pneumonia, emphysema, croup, and asphyxia from noxious gases; although, as Dr. Thompson had stated, in poisoning by illuminating gas it had failed to give relief. There was no justification, he thought, for the extensive use of oxygen in such diseases as anæmia, chlorosis, lithæmia, etc. Its absorption depended, probably, on the amount of hæmoglobin in the blood at the time the oxygen was administered; but in any event the amount absorbed was unquestionably very small. Although the pulmonary gymnastics of the inhalations might have a beneficial effect in certain instances, there were other remedies which could be employed with much greater advantage. That the use of oxygen hastened recovery in such cases he could not believe, and the recognized facts of physiology were certainly at variance with any such conclusion.

Dr. Beverley Robinson, on the other hand, was a most enthusiastic believer in the practical utility of the remedy. He said that he differed entirely from Dr. Peabody, and that his clinical experience afforded the most conclusive proof of the immediate and marked relief resulting in many conditions from the use of pure oxygen. The purity of the gas he considered a point of very great importance, and he said that one make of gas which he had formerly employed gave such poor results that he abandoned its use. There was a gas now manufactured in New York which was said to contain a certain proportion of nitrogen monoxide, from which he had obtained very satisfactory results, and it was worthy of note that Brown-Séquard had expressed his opinion that nitrogen was of great service in preventing the irritating and intensely exciting effects of oxygen alone.

In anæmia he had found that those cases were most improved in which oxygen was used in connection with iron. In albuminuria connected with atrophic nephritis he had found the general nutrition of the patient improved under the use of oxygen; the digestive and assimilative powers

being greatly assisted by it. Even in phthisis, while it did not have a curative effect, it might prove beneficial. In the first place, the inhalations caused the patient to thoroughly expand his lungs; secondly, oxygen was itself an antiseptic; and thirdly, it had the effect of improving the general nutrition. As had been well said, oxygen was really prescribed every time that a patient was sent to the mountains, to Southern California, to the plains, or on a sea voyage. That there were many cases in which it was impossible to send patients away, and he believed it was possible to stimulate the hæmoglobin in the blood, and thus to enable the patient who remained at home to carry more oxygen. In the use of oxygen he did not think we should be guided so much by experimental researches as by practical clinical experiences. Leaving out of consideration those cases in which he believed it had a decidedly curative effect, there were certainly many others in which the last hours of patients could be rendered much more comfortable by resorting to the use of oxygen.

Dr. Walter Mendelson took much the same view of the subject as Dr. Peabody. While it was true that in anæmia he had some quite marked results under the use of oxygen, he did not believe that the benefit noticed was in reality due to this agent. In this connection he cited the case of an old man who inhaled ten gallons of oxygen a day, and became greatly improved. This improvement, however, he was convinced was due to the systematic expansion of the lungs and to the moral effect of the knowledge that something out of the common was being done for him. In cases of dyspnœa from various causes he had seen more or less relief afforded by oxygen, yet all the patients died. Still, as Dr. Robinson had remarked, it was possible that their last moments were rendered more comfortable by the inhalations.

Dr. M. P. Jacobi said that the amount of oxygen which the hæmoglobin carries varies under different circumstances. In asphyxia of various kinds the physiological capacity of the blood remained the same, and therefore the indication was to administer oxygen. The correctness of this had also been shown by clinical experience. In anæmia, and especially chloro-anæmia, on the other hand, the hæmoglobin was diminished. The condition was precisely the reverse from that met with in asphyxia, and we could not cause a much greater amount of oxygen to be absorbed.

Dr. Andrew H. Smith said he was gratified to find that the work which he did twenty years ago for the most part still remained good. At that time he had demonstrated that animals could live perfectly well for four days in pure oxygen; care being taken to remove the effete products of respiration. It was his opinion that under ordinary circumstances the blood is not fully saturated with oxygen, and that the point of saturation corresponds with the physical demand. This allowed a pretty wide margin, and it was perhaps within this margin that a considerable amount of oxygen could be absorbed by the blood. Thus the demand for oxygen was much greater in athletes engaged in violent exercise than in individuals making but little physical exertion. Therapeutically, he had seen the greatest benefit derived from oxygen in catarrhal conditions of the air-passages, such as was met with in suffocative bronchitis. In such cases he was at a loss how to explain the relief afforded by the oxygen, unless it was a fact that under these conditions the blood did not take up as much oxygen as the system required. Dr. Smith also said he had used oxygen with satisfactory results in opium poisoning.

In closing the discussion Dr. Thompson said that convulsions were produced in the animals experimented on by the rapid increase of the pressure, and that such convulsions were quickly relieved by the rapid withdrawal of a portion of the pressure. He could not agree with Dr. Smith in his opinion regarding the saturation of the blood with oxygen, since he thought there could be no question that even under ordinary conditions the hæmoglobin was practically saturated with oxygen. He also believed that Dr. Robinson was unquestionably mistaken in attributing any irritating effects to oxygen. This was entirely disproved by his own and by Dr. Smith's experiments with animals; and it had been repeatedly demonstrated by others that pure oxygen has no irritating effects whatever. It produced no burning up of the tissues, as had been formerly supposed, and he could see no advantage over ordinary air in the nitrogen monoxide referred to.

During the evening a cat and a dog were successively subjected to progressively increasing pressures of oxygen in the pneumatic chamber. When the pressure reached 80 pounds to the square inch the cat was seized with a convulsion, and the dog had a convulsion when the pressure reached a little above 45 pounds. Both animals recovered after they were restored to the air.

P. B. P.

MISCELLANY.

THE 75,000 EDITION.—*The American Lancet* says: "On May 25th, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION issued an edition of 75,000 copies, thus reaching nearly all the physicians of the United States. It is hoped in this manner to interest more physicians in THE JOURNAL, and the American Medical Association. Especially is it hoped that it may attract a large number to the coming annual meeting at Newport. A pretty full preliminary notice of this meeting is given so that a fair idea may be had respecting it. Incidentally, it may be said that the edition fully pays for itself, without any reference to the regular subscribers, or the members of the Associ-

ation, so that any advantage that may accrue to either will be a clear gain."

The New York Medical Journal says: "THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—An edition of 75,000 was recently printed, enough to enable our excellent contemporary to bring itself to the notice of almost every physician in the country."

The Weekly Medical Review says: "With commendable zeal the editors of THE JOURNAL have issued 75,000 extra copies to the medical profession. This copy contains a lengthy list of the titles of papers to be read at the coming meeting of the Association. THE JOURNAL also contains a concise description of 'Newport-by-the-Sea,' and the neighboring places of interest, illustrated by near a dozen elegant plates. These extra copies which have been mailed to the physicians throughout the country are well calculated to arouse a more universal interest in the coming meeting, which will be held June 25th to 28th. The prospects are that the meeting will be larger than any ever yet held by the Association. The extra number of THE JOURNAL also contains a number of valuable contributions to medical literature and a brief review of the history of the Association."

Dr. R. J. Dunglison, of Philadelphia, writes us: "I think the Extra Edition a great success."

Dr. A. L. Hummel, of Philadelphia, writes us: "Your Special is a beauty. Please send me two more copies."

The Medical Times and Register says: "THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION comes out on May 25, with an edition of 75,000 copies. THE JOURNAL gives evidence of careful and competent editorial supervision; and if it is now under a temporary management, the Association can scarcely do better than make the present arrangements permanent.

The College and Clinical Record says: "An extra edition of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 75,000 copies, was issued on May 25th. It is a very attractive number, and the enterprise and judgment displayed in both the publication and editorial departments reflects much credit upon those who carried the project to a successful execution. Certainly the great bulk of the medical profession will now be thoroughly informed as to the objects of the American Medical Association, the publication and merits of THE JOURNAL, and the practicability and desirability of medical men becoming members of the Association, which they can now do with facility, either by attendance as delegates or by direct application at any time, merely forwarding a certificate of good standing in their State or local Society, and five dollars, annual dues, to the Treasurer of the Association, Dr. R. J. Dunglison, Philadelphia. They receive THE JOURNAL for the year free."

The American Practitioner and News says: "THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION recently added 75,000 extra to its regular edition. We sincerely hope that the enterprise of its management may be rewarded by the return of 75,000 *bona fide* subscribers."

LETTERS RECEIVED.

Dr. Seneca D. Powell, New York; Dr. R. J. Dunglison, Philadelphia; Dr. Fred Treon, Crow Creek, Dak.; Dr. J. B. Murdoch, Pittsburgh; Trommer Extract of Malt Co., Fremont, O.; Dr. John M. Batten, Pittsburgh; Health Restorative Co., New York; Dr. H. Longstreet Taylor, Cincinnati; Dr. Austin Flint, New York; Dr. S. E. Chaillé, New Orleans; Dr. E. S. McKee, Cincinnati, O.; Dr. W. H. Daly, Pittsburgh; Dr. David Barron, Lexington, Ky.; Dr. N. P. Dandridge, Cincinnati; Dr. G. C. Savage, Nashville, Tenn.; Dr. E. Pynchon, Chicago; Dr. P. L. Brick, Le Mars, Ia.; B. B. Mitchell, Block Island, R. I.; Wells & Richardson Co., Burlington, Vt.; College of Physicians and Surgeons, Boston; Dr. E. E. Montgomery, Philadelphia; Thos. W. Leeming & Co., New York; Dr. G. W. Powell, Moriah, N. Y.; W. P. Cleary, New York; Dr. T. J. Birch, Port Carlson, Pa.; Dr. John Specht, West Salem, Wis.; Dr. O. C. McDannell, Lowell, Mich.; Ohio Buggy Co., Columbus, O.; Dr. A. E. Owens, Dover, Ill.; Dr. Wm. H. Morrison, Holmesburg, Pa.; Dr. W. N. Miller, Pittsburgh; Dr. J. H. Goss, Fort Lamar, Ga.; Dr. W. A. Cooper, Dyersburg, Tenn.; Dr. A. L. Hummel, Philadelphia; J. H. Bates, New York; Dr. L. Duncan Bulkley, New York; Dr. H. v. Sweringen, Fort Wayne, Ind.; Dr. J. H. Ruggles, Creston, Ia.; J. P. Oleson, Dr. L. A. Kengla, San Francisco, Cal.; Dr. C. F. McGahan, Chattanooga, Tenn.; Dr. R. D. Clark, Akron, Ia.; Dr. R. H. Henry, Frankfort Station, Ill.; Dr. Thos. Taylor, Washington; Physicians' and Dentists' Insurance Association, Chicago; Dr. W. A. Jordan, Clinton, Ky.; Dr. H. C. Mooney, Laketon, Ind.; Nichols & Shepherd, Three Rivers, Mich.; Dr. H. R. Storer, Newport, R. I.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from June 1, 1889, to June 7, 1889.

Capt. Geo. F. Wilson, Asst. Surgeon U. S. Army, resignation was accepted by the President, and took effect May 31, 1889.

By direction of the acting Secretary of War, Capt. James C. Merrill, Asst. Surgeon, is detailed as a member of the board of medical officers appointed by par. 9, S. O. 108, May 10, 1889, from this office, to meet at the U. S. Military Academy, West Point, N. Y., on June 1, 1889, or as soon thereafter as necessary, to examine candidates for admission to the Academy, etc., vice Capt. Fred. C. Ainsworth, Asst. Surgeon, hereby relieved as a member of the board. Par. 4, S. O. 127, A. G. O., June 3, 1889.

Capt. W. O. Owen, Jr., Asst. Surgeon, leave of absence for seven days granted in Order 18, c. s., Ft. Gibson, I. T., is extended twenty-three days. Par. 2, S. O. 67, Hdqrs. Dept. of the Missouri, Ft. Leavenworth, Kan., May 29, 1889.

First Lieut. Jefferson R. Keen, Asst. Surgeon, leave of absence granted in S. O. 48, Dept. of the Platte, May 15, 1889, is extended fifteen days. Par. 3, S. O. 129, A. G. O., June 5, 1889.

APPOINTMENTS.

Philip G. Wales, appointed Asst. Surgeon, with rank of First Lieut., from June 7, 1889.

Theodore F. De Witt, appointed Asst. Surgeon, with rank of First Lieut., from June 7, 1889.

Benjamin L. Ten Eyck, appointed Asst. Surgeon, with rank of First Lieut., from June 7, 1889.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending June 8, 1889.

Asst. Surgeon J. J. Page (retired), granted one year's leave of absence to leave the United States.

Thos. B. Bailey, appointed an Asst. Surgeon in the Navy May 23, 1889.

George H. Barber, appointed an Asst. Surgeon in the Navy May 23, 1889.

George Rothganger, appointed an Asst. Surgeon in the Navy May 24, 1889.

George Tucker Smith, appointed an Asst. Surgeon in the Navy June 3, 1889.

Asst. Surgeon T. B. Bailey, ordered to the receiving ship "Dale," at Washington, D. C.

Asst. Surgeon Geo. H. Barber, ordered to the receiving ship "Vermont," at New York.

Asst. Surgeon F. N. Ogden, ordered to examination preliminary to promotion.

Asst. Surgeon P. H. Bryant, detached from Naval Hospital, Chelsea, and granted a month's leave of absence.

Medical Director H. O. Mayo (retired), granted one year's leave of absence, with permission to leave the United States.